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Textile World

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Editor: Douglas G. Woolf

Textile World's Semi-Annual Editorial Inventory

ONCE again, we "take stock." At the beginning of the year, we set down certain objectives — or "guide posts"—which we regarded as fundamentally important if textile manufacturers were to find their way through the traffic maze of present-day industrialism.

Overshadowing all temporary conditions emergent from the abrupt termination of speculative inflation, and from the uncertainty attendant upon tariff-making, is the progress made by our industry toward the attainment of those objectives.

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DURING the first six months of 1930, such progress has embraced:

1. Formation of the United States Institute for Textile Research, the first step toward supplementing economic research with technical research.

2. Laying of plans for the formation of a cotton-textile export association, the first step toward cooperative utilization of the facilities of the Webb-Pomerene Act in the scientific and systematic cultivation of foreign markets.

3. Focussing of the industry's attention upon the marked development in textile machinery during the last few years; and awakening of the realization that obsolete equipment has no place in present-day competition.

4. Formulation of more definite plans for wide-spread dissemination of sound and uniform cost principles—notably in the cotton division.

5. An honest attempt, in certain quarters, to apply cooperative methods in the development of sounder employer-employee relations in the industry.

6. Successful application, for the first time, of the cooperative principle to the question of the length of the work-week, a subject hitherto regarded as taboo, except behind the closed doors of a directors' room.

7. More general disposition to adjust production schedules, voluntarily, to the balance between consumption and demand.

8. Arousing of new interest in the possibilities of industry-wide advertising effort, as the result of the success of the "sampling" venture in styled cottons.

9. Frank discussion, in open convention sessions, of the advantages and shortcomings of coordinated activity—with the net result that the principle of cooperation was overwhelmingly endorsed.

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COINCIDENTAL with this progress within the industry, have been two developments in American business as a whole:

1. Completion of the second, and apparently final, stage of liquidation

following recent speculative inflation.

2. Removal of uncertainty as to final form of tariff legislation.

Every indication tends to confirm the belief that the bottom has been reached; and that an upward swing of the business cycle is due to start, probably in the latter part of August. Textiles, having undergone liquidation a long time ago and having been subjected recently to excessive declines in raw materials, are in a position to react promptly and sharply to this general business improvement.

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HOWEVER, temporary movements in either direction are of little significance in comparison with the permanent change which is being effected within the textile industry, and by the industry itself.

Each of the major fundamental developments which have been followed in these columns during the last five years points towards this goal: the creation of a sound economic structure permitting, as we have pointed out before, more adequate wage rates for employees and more adequate profit margins for management.

That the first half of 1930 has witnessed such real progress in this direction as outlined above, is cause for congratulation and for optimism.

However, each item in our list of objectives must be regarded as unfinished business. A start has been made on most of the important problems, and in certain cases results to date have been most gratifying. But the bulk of the work still lies ahead.

Many of the steps undertaken have been designed to meet emergency conditions. Real success will not have been achieved until such emergency measures are no longer necessary.

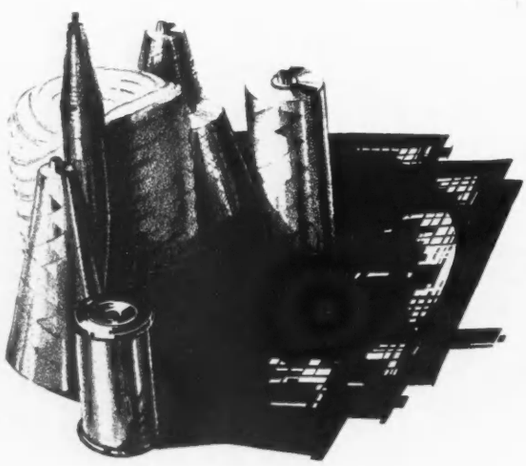
In other words, the cooperative activities within the textile industry must be regarded as a continuing program, altered from time to time as certain objectives are reached, but maintained as a permanent phase of manufacture. Otherwise, any results achieved will be but temporary ones.

The basis of this cooperation must be research, both economic and technical; research, not designed to meet exigencies of the moment, but planned as creative and control equipment for the broad future.

In no other way can the industry, collectively and individually, achieve that flexibility which we have listed as the primary requisite in business today.

Douglas G. Woolf

Editor



Letters to the Editor

Employer-Union Cooperation

WASHINGTON, D. C.

Editor, TEXTILE WORLD:

It is with a great deal of pleasure and gratification I read your leading editorial in the TEXTILE WORLD for June 21. Your forthright constructive statement of the spirit of union-management cooperation will, I am sure, be helpful in promoting better methods in an industry that needs to find more constructive methods. Your statement is a service to both workers and management.

WM. GREEN, *President*,
AMERICAN FEDERATION OF LABOR

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CHAPEL HILL, N. C.

Editor, TEXTILE WORLD:

Allow me to express to you my hearty congratulations on your editorial in the TEXTILE WORLD of June 21 on "Employer-Union Cooperation." This is one of the most encouraging articles I have seen lately from any associated with the textile industry, or for that matter those in any American industry.

A group of the faculty in the University of North Carolina this year have been preparing a group of papers dealing with the setting of industrial life in this State, and with current developments. These papers are being published in a few weeks as the Yearbook of the North Carolina Club. It happens that in my paper I have used the Naumkeag Mills as an example of union-management cooperation in the textile industry. Would you kindly give me permission to copy your editorial in full as part of my article? I hope I may be granted this privilege.

W. F. FERGER, *Assistant Professor of Economics*,
UNIVERSITY OF NORTH CAROLINA

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SALEM, MASS.

Editor, TEXTILE WORLD:

Both Mr. Hood and I think your editorial on "Employer-Union Cooperation" excellent, and that you've grasped the great idea in your usual comprehensive way, and also put your finger on a most, to me, intriguing side of the problem,—quite naturally the union makes the most of the proposition, as you say, makes a "show case" of it, but really they are trying most sincerely to help in working out our economic problems—and have already achieved material results from which the Naumkeag benefits.

J. FOSTER SMITH, *Agent*,
NAUMKEAG STEAM COTTON CO.

The Textile Foundation

BOSTON, MASS.

Editor, TEXTILE WORLD:

I appreciate very much the splendid article which you published in your issue of June 14 with reference to the Textile Foundation.

You have made a very clear and comprehensive statement with reference to the appointments in the organization and the work, all of which I appreciate very much. I feel that this Foundation can be of real service to the industry. Of course, it will take some little time to decide upon a definite policy and get under way but we hope to do so at the earliest possible moment.

FRANKLIN W. HOBBS, *President*,
ARLINGTON MILLS

Ad Valorem Wool Duties

MARCELLUS, N. Y.

Editor, TEXTILE WORLD:

I am attaching herewith a memorandum on the wool question.

The TEXTILE WORLD has not taken any position on this wool question although it is a question that has to come up some day and the sooner the better. There is nothing of greater value to the woolen textile business than that we should have a uniformity in price, due to grade, and that cannot be accomplished in any other way than by a duty by value, or free wool. These are the only two methods of equalizing the duty on wool.

Now, whether you people will have sand enough to take this up in earnest with the public is a question. Judging by the past you won't, although the elder Bragdon, back in 1896, was a strong advocate of the ad valorem duty upon wool.

EDWARD MOIR, *President*,
CROWN MILLS

The memorandum attached to Mr. Moir's letter follows:

At the London sales of April 9, 1930, there were sold 5,966 bales of New Zealand scoured wool with the results as quoted below. You will observe the great variation in the ad valorem percentages of duty. No manufacturing business can be consistently successful in any country with such a wool tariff as the following indicates:

Quantity	5,966 bales, 1,402,010 lb.
Value	$345,617
Hawley-Smoot duty	$518,743
Ad valorem equivalents	150⅞%
Over 200% ad val.	654 bales
Variation of duty	66 to 389% ad val.
From 100 to 200% ad val.	4,873 bales
From 77 to 100% ad val.	439 bales

Grease Wools—As of May 1 values if bought in London and imported in the grease, under the new tariff the duty would vary from 56 to 148% on value.

The above shows comment to be unnecessary. EDWARD MOIR.

Our answer to Mr. Moir follows:

Dear Mr. Moir:

In fairness to Mr. C. H. Clark, former editor of TEXTILE WORLD, who was responsible for many years for the tariff policies of this publication, we have submitted to him your letter and its frank arraignment of the editorial "sand" reflected by those policies. Mr. Clark's reply follows:

"It is true that J. H. Bragdon, Sr., at one time (perhaps in 1896, as Mr. Moir states) was an advocate of ad valorem duties for wool, but unlike Mr. Moir he awakened to the error and futility of such advocacy and during the latter part of his journalistic career he was a strong advocate of specific duties for wool. Since then *Textile Manufacturers Journal*, and its successors, *Textile World Journal* and TEXTILE WORLD, have stood consistently for specific duties.

"Considered solely from the selfish standpoint of the manufacturer, free wool would be most advantageous, and next to that an ad valorem tariff. The prime function of an adequate protective tariff is to provide such protection when it is most needed. Usually the need is greatest when commodity prices are lowest. The protection afforded by an ad valorem tariff varies with every change in price of the protected commodity, and is least when the price is lowest and protection is most needed. In the case of wool this would be highly advantageous to the domestic manufacturer, but as highly disadvantageous to the domestic grower, and it happens that the farmer plays an important part in the politics of tariff making. It is significant that Mr. Moir's arguments for ad valorem duties on wool have never made a strong appeal to domestic wool growers.

"It is quite true, as Mr. Moir says, that reasonable uniformity in the price margin between different grades of wool is highly desirable, but it has not been attained under free wool, and would not be under ad valorem duties; the vagaries of style and of supply and demand are responsible for wide variations in these margins. They are accentuated, it is true, by specific duties, but the latter have the advantage from the protective tariff standpoint of providing the greatest protection when it is most needed.

"We do not recall that Mr. Moir, or any other advocate of ad valorem duties on wool, has ever answered satisfactorily the masterly arraignment of the ad valorem system for wool protective duties contained in the brief of the late John P. Wood, former president of the National Association of Wool Manufacturers, presented at the hearings before the Ways and Means Committee on the Fordney-McCumber tariff."

I might add that I heartily endorse Mr. Clark's analysis of the situation.

We wish to thank you for your frank letter on this matter.

Editor, TEXTILE WORLD

The Week in Textiles

Outlook . . .

COTTON goods were quiet, partly as an after-effect of holiday and mid-year inventory and partly through divergence of opinion between buyers and sellers on prices. Sellers expect a better market before end of month. Cotton acreage reported 2.7% below last year. . . . . In wool goods some tropicals are reported 10% below year ago for new season, but there is reticence against opening prematurely . . . . Hosiery business scarce but sellers are hopeful. Heavyweight underwear is still sluggish. . . . . An all-time low price on raw silk gives market a blow but there are hopes for progress on current bargain basis when confidence is restored.

British Cotton Recommendations . . .

BRITISH GOVERNMENT cotton report issued July 4 included among its main recommendations extension of the practice of mixing Indian with American cotton to reduce costs; also adoption of larger number of ring spindles and long draft in spinning plants; increased use of automatic looms (though evidence showed that these could not be economically worked on single shift per day); formation of larger units, strong enough to formulate definite production policies and enter into arrangements with one another and with other sections of the industry for forward policy. . . . . Strong amalgamations of merchants were also recommended in the report. Fresh capital for approved schemes will be forthcoming, it is said, and missions to the Far East to investigate conditions are advocated.

Salute to Cotton Textile Industry . . .

GEORGE A. SLOAN, president, The Cotton-Textile Institute, will be guest speaker during the radio salute to the cotton textile industry by Westinghouse Electric & Mfg. Co., over 36 N. B. C. stations, Tuesday, July 15, 10 P.M., eastern daylight saving time. The story of cotton will be told, including an outline of its many uses and a vision of the important place it holds in the industrial organization. . . . . A background of music has been carefully prepared.

Flexing the Tariff . . .

FROM THE volume of Senatorial requests for equalization studies under the flexible clause of the new tariff, the Tariff Commission has its work cut out for it. Plans are on foot to speed up the commission's operations which seem desirable. . . . . So far, the textile items pending action are: wool rags, waste, yarn, cloth garments, floor coverings, and raw wool—in fact almost the entire wool schedule; wool felt hats; umbrella covering; laces, lace fabrics, and lace articles including the negligible item of shoe laces; and hemp yarn and halibut fishing line. . . . . In determining what items should be subject to applications for tariff relief, it must be remembered that the decisions are likely to take a distinct downward trend. Thus an application for a rate increase might result after impartial investigation with careful checking by the commission's examiners in an actual decrease. There is little doubt in Washington that many agricultural items are vulnerable, having been set at rates above those recommended.

Silk on Hand Declines . . .

SILK IN STORAGE at the end of June showed a 20% decline compared with the previous month according to figures of the Silk Association of America. . . . . During the same period, deliveries to American mills declined 22½%, while imports were at practically the same level. . . . . The present figures represent the low point in each division for the time covered by the association's figures, a period of three years.

Cotton Acreage Off 2.7% . . .

ACREAGE PLANTED to cotton for the 1930 crop season was estimated on July 8 by the Crop Reporting Board of the Department of Agriculture, based on reports as of July 1, at 45,815,000 acres. According to the board this is a reduction of 1,252,000 acres, or 2.7%, below that reported on July 1, 1929, and 1,131,000 acres, or 2.4%, below the reported acreage for the corresponding date in 1928. Acreage reported on July 1, 1926, was 48,230,000 acres. . . . . This year's estimate relates to the acreage standing on July 1, allowance having been made for any acreage which was abandoned prior to that date and for any acreage replanted and in cultivation on that date, according to the board's statement. The cotton exchange went off 30 points after the report but a rally recovered most of the loss.

Knit Goods Statistics . . .

AT THE END of May, unfilled orders for all classes of knit underwear amounted to 1,610,912 doz. compared with 1,549,049 doz. at the end of April and 2,277,515 doz. a year ago, according to the Department of Commerce. . . . . New orders received during May increased slightly more than 10%, while shipments remained approximately the same; production declined about 10%. . . . . Hosiery statistics from the same source show a slight gain in unfilled orders during May and a comparative reduction in stocks for the same period. . . . . Production declined as well, although all changes were fractional. May figures look poor against those of last year. . . . . Unfilled orders are lower by 50% while production has been curtailed only about 20%.

American vs. Indian Cotton . . .

PRICE COMPETITION between American and Indian cotton is slowly becoming less intense, says the current report of the New York Cotton Exchange Service. The differences between the prices of competing varieties of American and Indian cotton narrowed somewhat further during June, according to the analysis, furnishing statistical confirmation to recent re-

ports from abroad that Indian prices were not following fully the decline in American prices. . . . . The exchange service analysis, based on comparisons of six competing varieties of both staples, show that, at the end of June, American cotton was selling at an average premium of 2.05c. above Indian against 2.43 above at the end of May, 3.35 above at the end of June last year, and an average premium of about 0.75c. . . . . That is to say, while the discount on Indian cotton is still considerably wider relative to American, than usual, the discount is slowly narrowing, and foreign spinners will undoubtedly tend to revert to a more normal use of the two cottons.

Pattern From Hoover "Scrawl" . . .

THE HOOVER "scrawl," which was the subject of much comment a few months ago when a newspaperman requested the President to autograph a penciled sketch that he had made during a telephone conversation, has recently been adopted by a textile designer for reproduction as a cotton print, says the Washington *Times*. . . . . A sample of the scrawl and 19 other signatures are now on display in the textile division of the National Museum, all presented by The Cotton-Textile Institute of New York and taken from a group of 60 which had been selected by the institute out of a collection of 1,000 that had come from the leading textile manufacturers of the country as representative of the best work.

"Wool" in Knit Underwear . . .

EFFECTIVE JAN. 1, 1931, the use of the word "wool" in the advertisement and sale of knit underwear will become an unfair method of competition rendering the offender liable to prosecution by the Federal Trade Commission unless the percentage by weight of the wool content of the garment also is stated. A flat tolerance of 3% plus or minus on any labeled percentage will be permitted. . . . . Approval by the Commission of this rule as proposed by the Associated Knit Underwear Manufacturers to eliminate the misbranding evil, caused some surprise among trade association executives and attorneys who have expressed doubt recently whether trade practice conference rules, in the form approved by the Commission since adoption of its straight-laced policy, would be of much practical benefit to the industries proposing them. . . . . Evidently the Commission relied upon the precedent established in 1923, when it held that the use on watch cases of the term "gold filled" is deceptive unless accompanied by a mark indicating the carat fineness.

Sales Lag in Cottons . . .

ALTHOUGH PRODUCTION of standard cotton cloths in June was at a rate 10% below May, which was the lowest recorded during the 2½ years since these reports have been comparable, stocks increased and unfilled orders fell off. . . . . Figures from the Association of Cotton Textile Merchants of New York indicate that there should be no let-up in the movement for curtailment. June production amounted to 198,539,000 yd. for four weeks. Shipments, at 182,652,000 yd., were 92% of production, but sales were only 129,947,000 yd. or 65.5% of production. . . . . Stocks, at 466,368,000 yd., gained 3.5% and unfilled orders, at 219,040,000 yd., decreased 19.4%. June production averaged 50 million yards weekly. The peak in the last 2½ years was 75 million weekly and the average prior to May, 1930, was 67¾ million.

Athletic Field Tarpaulins . . .

NEARLY 500,000 yd. of 13 oz. cotton canvas is now in use to protect baseball diamonds, football fields, tennis courts, etc., from rain. Demand for the tarpaulins should at least double within the next decade according to Bulletin No. 10 of the New Uses for Cotton Series just issued by the Dept. of Commerce. It is written by James B. Lockwood and is tenth in the series. . . . . Tarpaulins are super-insurance against rain postponements, says the bulletin. They are made of one or more pieces as convenient and the largest is said to cover 10,000 square yards. Life of these tarpaulins is from three to ten years. There is considerable variation in the waterproofing methods and probably room for improvement in this field.

Harris & Ewing

Exhibit of cotton dress materials at the Smithsonian Institution, Washington, D. C., established through cooperation of The Cotton-Textile Institute. The work of American mills is thus brought to the attention of the thousands who visit this museum.

Views of Yokohama Bourse. Photograph above shows exterior of building; that below, an active trading day on the floor

The Crisis in Silk

By
William A. Spafford

Raw silk drops to 40-year low—American silk trade hampered rather than stimulated—Over-supply is an important cause—Japanese situation is serious

WORLD markets for raw silk and silk goods are in a chaotic state at the present time. The continuous drop in raw silk that has brought levels down to the lowest point in 40 years and possibly longer is responsible for the plight of the producer and consumer. Of these two the position of the producer is by far the worse. But the silk trade in this country, using about 80% of the world's reported output, is faring none too well in the price debacle that is afflicting the primary markets. Ten years ago the vicious circle of rising prices occupied a prominent part in the news. Now it is the vicious circle of steadily declining prices that has demoralized the fabrics markets.

A month or two before the stock market break in November, a fair price for medium grades of warp and filling stock of Japan raw silk would have been $5.00 per lb. Shanghai grades were selling on about the same basis and Canton 14/16 was around $3.80 per lb. The reelers in these three producing centers, while not enthusiastic about the prices they were receiving, at least were confident that to dispose of their total output would not be difficult. The trade here was mildly optimistic in viewing the spring season of 1930, anticipating a good broadsilk demand due to the changing styles that accented longer dresses. The hosiery mills looked for the normal year to year increase.

We mention the foregoing so that the reader may gain the proper perspective as to what followed. By December the market had dropped to a $4.50 basis and the Japanese Government had intervened in an attempt to prevent further declines by means of liberal loans to the filatures. Some of the latter were already in need of cash to tide them over the customary winter suspension of reeling. The next drop came in late February when Saiyu abroad broke to 1120 yen and the Silk Exchange in New York to $4.15. An expansion of the loan program, with the Government guaranteeing the banks on the minimum basis of 1060 yen, halted this.

Trade Bought at Apparent Low

During May first offerings of new season silk were made at $4.10 to $4.20 for high grade yellow 20/22s. Only a moderate response was noted and these prices were reduced first to $4.00 and then later in the month to $3.75. A heavy volume of silk was contracted for at $3.75 but the rally was not maintained and early in June, just prior to the withdrawal of the Government from the nominal control of the market, prices broke badly to $3.20 for top grade warp stock. This was the opportunity that the broadsilk people here had been waiting for and they took full advantage of it. The scale buyer who had been operating on the way down from $3.75 or $4.00 doubled up on purchases and those more fortunate, who had no new season silk on contract, bought their requirements for three or four months ahead. The hosiery trade was less emphatic in their response but the total booked with the weavers alone was estimated at 50,000 to 60,000 bales.

In this brief resume which brings us up to the early part of June, there is little hint of any prolonged curtailment in raw silk consumption. Nor was there any, although conditions in the hosiery end needed correction in the shape of further curtailment. During May, mill takings showed a falling off to 40,823 bales as against a 49,000 bale normal but this could have been laid at the doors of the lack of adequate quantities of spot goods coupled with a 25c. per lb. premium. Cumulative takings through May amounted to 557,000 bales, showing a 19,000-bale increase over the previous year.

To gain an idea of the broadsilk trade's willingness to operate freely at $3.20 it is necessary to point out that such a level of itself represents a drop of over 50c. per lb. from what might be fairly considered a pre-war average of prices which was about 900 yen in Japan or $3.75 here. At the same time Canton 14/16, which was being taken in large quantities on a scale down from $2.00, sold at $1.75 per lb. The same tactics on the part of raw silk buyers, that is to say the purchase of good quantities during June when the filatures in Japan were in the throes of financing the spring cocoons and in need of additional capital in July and August to handle autumn cocoons, had proved successful in previous years.

The whole trouble with the consuming industry in this country right now is the fact that the raw market, following a rally of a week's duration when prices jumped 20c. per lb., resumed its interrupted descent. On the National Raw Silk Exchange quotations broke to $3.00 late in the month and at the present are at $2.75. Open market prices in Japan have dropped to 700 yen for 80% silk which would be about 670 yen for Saiyu. Yokohama prices are presumed to be 30 yen higher which of itself indicates the chaotic conditions prevail-

ing for there is no valid reason why such a difference should exist. On the Yokohama Bourse futures have sold as low as 651 and at Kobe as low as 640.

The last named price is the lowest recorded price for raw silk in Japan for 40 years and possibly much longer. During the panic of 1907 which represented close to the ultimate in the way of depression in the consuming industry here, the Bourse sold down to 821 and the open market at 800 yen per bale. In 1912, when the protracted strike in Paterson hampered the demand for raw silk, the Bourse sold at a low of 804 while during the hectic days following the outbreak of the World War, when markets were almost entirely cut off because of the shipping situation, the Bourse sold at 675 and the open market at 700 yen. The lowest point, however, was back in 1896 before the discoveries of gold in Alaska and the Transvaal had time to start world commodity prices on their 25-year upward trek. At that time the Bourse sold at 642 yen.

Last Drop the Worst

It is the drop, during the last 30 days, of 50c. per lb. from what had been confidently considered by nearly all, including the writer, as the absolute low point, that has plunged the trade in America into a position that will take some working out. During the spring months broadsilk and hosiery people were moving their production and cutting down on stocks. Also they were using up such quantities of raw silk as they had on contract. Raw silk losses were not important, for the filatures, banks, and the Government in Japan were all kindly combining to carry the 100,000-bale surplus.

During June, as the market kept on dropping, buyers of finished merchandise became more and more wary so that at the moment business is temporarily dead. The last drop of 50c., the trade here has borne. It is reported already that some firms which own silk at $3.75 are finding difficulty in getting the necessary letter of credit for the importation of the silk. Settlements in some cases have been arranged with the seller. Thrown silk houses are scrutinizing credits carefully, as are importers, and both are in a quandary as to whom to ship silk. Failures are expected to increase as the mid-year statements come to light.

The smaller firms that do a day to day business and must keep on maufacturing and selling in order to have the receivables coming through to pay their bills, are in a precarious state due to the difficulty of maintaining operations over the last 60 days. And, to be added to everything, is the market's trend itself which has not yet indicated a stabilized condition. While the weakness persists there is, as always, the waiting attitude of the cutting-up and store buyer searching for the ultimate low in distress merchandise; the critical attitude of those who have bought too soon, and the claim and adjustment men who often harass the reputable seller.

It must seem more than a trifle strange to a cotton man who gives but passing notice to a 5,000,000 bale carry-over, or to say the coffee trade, which may have a year or more supply on hand in Brazil, that an extra 80,000 bales in the Japanese carry-over can terrorize an industry. This represents only 10% of the yearly world production of raw silk, for we may mention in passing that stocks in Canton are only slightly above normal and that in Shanghai they are below normal. To heighten the picture it can be pointed out that, of the entire carry-over in Japan of 134,000 bales, which of itself is only 16% of a year's production, about 110,000 bales are securely held under guaranteed loans and subject to the dictates of the Government. Stocks of raw silk in the United States are only 50% of normal.

The drop started back in November when the stock market broke. The causes of the continuing decline were many, but emphasis could be placed upon the increase in the Japanese crop which the United States failed to take as expected; the drop in European demand which fell below a year ago by 35,000 bales; the decline in price of silver which dislocated import and export markets in China; competition from rayon in the printed and plain crepe field; and last but not least the restoration of the gold standard in Japan. To the effects of the latter, the writer ascribes much of the severity of the latest drop which has plunged raw silk temporarily at least to its lowest depths. The move to restore the gold standard in Japan could hardly have been timed to worse advantage, coinciding as it did with the partial depression in this country and the drop in silver which curtailed the purchasing power of its best customer for manufactured products, China. As the yen was pushed upward a year ago, the writer predicted that Japan would face an actual or a near panic as she deflated her price level to world prices. There is only a gloomy satisfaction in seeing this prophecy fulfilled so soon.

Certainly panic prices prevail in Japan at the present for raw silk. A price of 650 yen compares with an average pre-war level of 900 yen. We have pointed out that during the bitterest days of pre-war depression in 1896, 1907, 1912, and 1914, prices were not so low as at present. In order to adjust the coming year's production to consumption it would seem that the market has gone too far. While the selling hysteria still rages on the Bourses in Japan, it is futile to attempt to set an arbitrary bottom. Inevitably it will cease, however, and the market take a saner view of things.

Two factors making for a sharp recovery in prices are: first, the tremendous stimulus to consumption that $2.75 Japan and $1.50 Canton will bring; and, second, that even at the moment there exists a deficit in the normal visible supply of 25,000 bales if we are to eliminate 112,000 bales held under the loaning plan.

Photos by Nat'l Ass'n of Raw Silk Industry of Japan

Okaya district, center of Japanese silk reeling industry

Business Is Better Balanced

Say Business Paper Editors

PROPER BALANCE between production and consumption of manufactured goods is the principal objective of American business. End of the depression is in sight; improvement is anticipated in the fall. These facts are emphasized in the semi-annual survey conducted by the National Conference of Business Paper Editors and the Associated Business Papers, Inc., under the auspices of the Editorial Advisory Committee of the Conference. Douglas G. Woolf, editor of TEXTILE WORLD, is chairman of this committee; Stanley Dennis, directing editor, Gage Publications, vice-chairman, and G. D. Crain, Jr., editor of *Class & Industrial Marketing*, and president of the National Conference, a member ex-officio.

FARMERS and business men, in 1930, seem to have a common objective. While farmers are being urged to reduce crop acreages to lessen overproduction of food stuffs, American business seems already to have begun to strive for proper balance between production and consumption of manufactured goods. This new trend in industry is revealed by the sixth semi-annual survey of business conditions conducted jointly by The National Conference of Business Paper Editors and The Associated Business Papers.

Editors of 150 of the leading industrial, technical, merchandising and service publications, reporting for their respective fields on conditions for the first six months of the current year as compared with the same period of 1929, state that during the months of depression three major influences have been at work They are: equalizing of production and consumption, maintenance of high wages even during restricted employment, and hand-to-mouth buying of both raw materials and finished products. They likewise hold that the tariff just made effective will not have any widespread disturbing effect.

The end of the period of depression, these editors believe, is in sight. They look for improvement of business sometime between September and November. When this comes business will respond readily since inventoreis of raw materials in industrial plants and wholesale and retail stocks of goods are low and getting lower. This will mean a decided improvement in employment just as soon as buying begins to return to normal levels since there are no large stocks of materials to be unloaded before productive activity is resumed.

At the same time that business is generally below par and employment off as much as 40% in some lines, certain special industries are above the 1929 level. Shipbuilding is a notable example. Here employment is probably 20% ahead of last year and the outlook appears good for the next five years. In fact it is extremely active with a number of contracts placed for large vessels intended for overseas trade. In the chemical industry two corporations have construction and expansion programs that call for $27,000,000. Also the planning and building of long distance natural gas transmission pipe lines in addition to three gasoline pipe lines involve an expenditure estimated for present projects at $300,000,000. In department stores the report is that aggressive concerns are able to maintain sales volume and profits even if located in poor business towns. At the same time these stores are determined to make the summer season a business producer and are not concerning themselves with advance showings of fall goods. This is delaying the fall business of wholesalers but nevertheless is considered a wise move.

The generation of electric current, commonly held to be an excellent indicator of business, since electricity is only produced as consumed, shows for all the United States that about 2% more electrical energy was generated and consumed during the first five months of the current year than for the same period of 1929. This increase to 40,456,266,000 kilowatt hours shows that, as a nation, our consumption of electricity for light and power purposes in industry and the home has not been curtailed, which might have been expected during a general depression.

The building situation in the United States, editors of papers concerned report, is behind last year in private construction, but ahead in public works. Residential contracts are 47% behind last year while contracts for non-residential construction work are only 8% behind; and that for public works and utilities is 40% ahead of a year ago, with the Government's program of public works construction not yet fully in action. This means that the total construction of the country is only 12.5% behind that of last year and there are indications that there will be improvement throughout the remainder of the year, and that 1931 will see a decided improvement, especially in residential construction.

The depression of the past months does not seem to have affected the manufacturers and dealers in wearing apparel as might have been expected. The retail clothing business has not been bad and the fact that stocks on hand are low points to quick recovery as soon as the public begins to increase its purchases.

In the textile field where employment has been lower and production sharply curtailed, raw material stocks are low and the outlook is for improvement during the last quarter of the year.

The iron and steel industry reports that production of steel ingots is only 16% under production in 1929. At the same time the rising volume of structural steel business and large orders for pipes for transcontinental pipe lines have been the most encouraging developments in this industry during the past half year. In the machine tool field, redesigning for more economical manufacture to meet market conditions is going on widely and an upturn is expected in the fall.

With the railroads, employment for the first four months of 1930 was 4.2% below that of 1929, while their passenger business was off 8% and freight business was off 9.7%. A more than seasonal increase in the volume of freight is anticipated during the last three months of this year.

Textile Manufacturers Must Stimulate Machinery Improvement

By Dwight E. Beebe

Director of Service, Alexander Hamilton Institute

I QUITE agree with the statement by Henry G. Lord in TEXTILE WORLD that new textile machinery which will produce better quality weaves, develop greater speed and operate at lower cost, will constitute a step in advance. Should the new machine units be flexible—easily convertible for the production of two or more types of fabrics—their value, it strikes me, would be more enhanced.

THERE IS a dual responsibility. The machinery maker can produce, and will produce, only as fast as manufacturers will purchase new devices.

As stated by Mr. Lord, it is incumbent on machinery manufacturers to adopt this policy. It is the principle followed in other lines, particularly where the style element is a factor.

New machine units have made it possible for many organizations to increase output without an increase in overhead expense, and to improve product at the same time. I refer now particularly to the automobile industry. In some cases spoilage and breakage have been reduced and delays in operation have occurred at less frequent time intervals.

There is, of course, another phase of the situation which, it strikes me, may well be developed. This phase goes hand in hand with the responsibility of manufacturers of consumer products. I refer now not merely to the readiness with which textile manufacturers will respond to the efforts of machinery makers, but also to their readiness to adopt, to purchase, to try out new plans, to study the wants of ultimate consumers and to request, even demand, new and better machinery for the purpose of keeping pace with the constantly changing demand of a constantly increasing number of consumers in the most prosperous country the world has even known.

True in Other Industries

Textile manufacturers may stimulate machinery makers to greater effort by constantly calling on them for something new, by demanding steady progress in the development of new units, new attachments for old units, greater flexibility, machines that will produce better work, and operate on a lower yardage production rate.

This is the policy of the railroads, for example in dealing with the makers of locomotives and rolling stock, of signal manufacturers, and the like. It is the plan followed by paper makers, in demanding not only better but faster machines. You see it, as stated, in the automobile industry where the style changes every year.

Freight and passenger traffic men, paper makers, shoe manufacturers, producers of automobiles, of electrical goods, and so on, constantly demand something better, with the result that machinery makers are in keen competition with one another to meet these increasing and insistent requirements.

Research departments of manufacturing and selling organizations are seeking steadily to determine something new, a different way to apply an old principle, to satisfy that portion of the consuming public that has not yet purchased and is waiting for better products.

You see it on all sides—in the coloring of kitchen ware, bath room fixtures, china, the new and colorful creations of fabrics for women's wear, which have sold so well and so rapidly during the last few years. Evidence of the manner in which new devices meet with response by the public may be seen on all sides.

I venture to suggest that it might be well to ask the question as to whether the textile manufacturers in the past have in turn responded to the efforts of machinery makers to the extent that they have been encouraged to develop new units? Are the New England mills, for example, equipped with machinery that produce as fast and at a cost as low, as the mills in the South? Would there have been the same development of mills in the South, if the New England mills had steadily eliminated old and installed new machinery?

A Dual Responsibility

The thought I have in mind, is that in the creation of new fabrics, the employment of new machine units, there is a dual responsibility. The machinery maker can produce, and will produce, only as fast as manufacturers will purchase new devices.

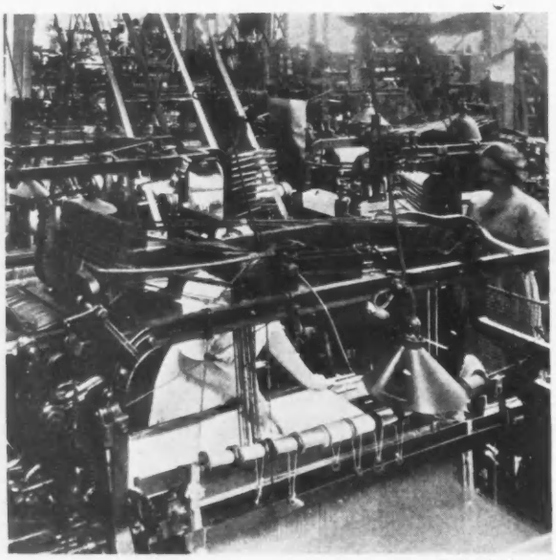
There must be as I see it reciprocity, on the part of textile manufacturers, receptivity to new ideas. More, there should be, I believe, more insistent investigations, and research on the part of textile manufacturers, in the search for the new products necessary to meet the changing demands and changing requirements of the average consumer.

We are living in a machine age. One of the many factors of prosperity may be found in the willingness of men to adopt the new ideas, in order to furnish ultimate consumers with the new products which they seek in a country, the history of which has been one of constant change, betterment, progress, and profit, for those who have realized that they must assume part of the responsibility which the machinery maker accepts.

STARTING MARKS—

the Bugbear of Silk and Other Weave Rooms

By H. E. Wenrich



Ewing Galloway

Taking precautions against starting marks

MENTION starting marks to the weaving foreman and see how quickly he hustles to the loom that is causing the defect. The loom is gone over from weights to dobby jacks, but the investigation often leaves him in the dark as much as before. The starting marks can be remedied at once if they are due to loom breakage or to some part coming loose; but when the basis of the trouble is not so evident, it requires the better part of a day's work for the section foreman and fixer to find it.

There are so many causes for starting marks that it requires considerable space to explain them and to define the various terms used in speaking of them. A real starting mark is entirely different from a joining mark, although heavy and light joining marks are referred to as starting marks in many mills.

The mere mention of starting marks is often sufficient to create a heated discussion, because many different ideas are held regarding their causes and remedies. The first step in finding the cause is to determine the type of the starting mark in order that one may be governed accordingly. There are several means of sifting the trouble and bringing it down to a few, certain, well-defined causes. Once the cause is definitely determined, the recurrence of the same defect may be prevented.

Common Starting and Joining Marks

A common starting mark is that caused by the starting up of the loom after it has remained idle for several days. We have also joining marks (called starting marks) after the weaver has ripped out some defect and started up the loom again. These joining marks, when tight about two to ten picks or more—as is usually the case,—are caused by improper setting of the cloth against the reed. The weavers also will set the cloth light and cause light joining marks with a few picks less than the amount required to make a perfect join. On the cheaper class of merchandise, the starting marks are overlooked to a certain extent, especially if there is a big demand for the goods; but in the better class of merchandise, it is very nearly suicide to try to push material onto the market when there are starting marks through the piece. As most starting marks are caused after a rip back, it is here that the closest attention should be given.

One of the best methods to prevent starting marks is of course to eliminate the necessity for ripping out of other defects that are of less importance. A worth-while practice, which one mill of my acquaintance insists upon and which I have adopted to a certain extent, is the inspection of all minor defects by the weaving foreman before the weaver is allowed to rip out the defect or to let it pass down. This has proved of great help in preventing starting marks due to ripping out. The weaver calls the foreman to inspect the float, shire, broken pick, or whatever the defect is, and the foreman places his "O. K." on any defect that could be passed. A broken pick close to the edge of the cloth is far preferable to a heavy or light joining mark. The same applies to edge floats, light shires, and other imperfections which would not show up as readily as the starting mark. Every mill could adopt the same system or improve on it.

A small card kept at the loom and placed on each piece is very useful in keeping tabs on defects, and it affords a means of checking up on the foreman's passing ot defects. A sample of this card is shown in Fig. 1. It is tied to the cloth at the time the piece is taken off the loom. After the piece has been inspected, the card can be sent back to the weaver, and it will show him the classification of the piece and the yards or picks woven, as well as any other facts that the inspector desires to inform him about.

However, when a heavy join or a light join has been made, the difficulty can be overcome with careful setting of the loom by an experienced weaver. There are numerous reasons for the heavy and light joins. One of the most common is of course inexperience of the weaver in setting the loom properly. A careful set will eliminate the mark in most cases. One good way to set a loom is to let the cloth back several picks tight, make one pick, and then make another set. This often results in a proper beat-in of the pick and eliminates a bad set.

One of the reasons for a light join is that the weaver in setting the loom will let the cloth back the proper

distance, lift the weights in place, make the set, and imagine all is well. He starts the loom up, and nine times out of ten makes a light join, due to the fact that, when the first pick has been made, the shafts shift into the proper place and cause a different tension on the warp. In letting the warp back after ripping out, the harnesses move backward and are held in this manner by the lifting of the weights. When the loom is started up once more, the shafts shift forward and cause a light joining mark of several picks. One good way to overcome the light join made in this manner is to use a cloth setter and reset the cloth for at least four picks. This will eliminate both light and heavy joining marks.

WEAVER'S CARD

Time Started 9/26 7:30 A.M. Time Finished 9/28 8:10

7.83 weight

PIECE No. 29303 | Yards 76 | COLOR OF TRAM Right Canary Left Green | Tram Lot 1020 1713 | THD 3 | Quality 2058 | Picks 76 | Class B | Picker H Croker | Measured by B.A.

LOOM 66 WARP 3164 CUT 9 | Organ Lot 710 | Color of Organ yellow | Greige Width 44¼

Day	Weaver	Yards
	a ferio	573
	c ferio	245

Broken Picks		Rough Cloth	
Finger Marks		Picking Back Marks	
Double End Out	3"	Slack Pick	
Single End Out	17	Double Pick	
Three Ply End Out		Stickers	
Light Joining		Smash	
Heavy Joining		Shaft Marks	
Tension Marks		Heavy End	
Floats		Hole or Cut	
Ends Drawn in Wrong		Bad Edge	
Reed Marks		Slipping Marks	
Fling Slugs			

Fig. 1. Sample of card kept at loom and tied to cloth when piece is taken off; it is useful in keeping tabs on defects and in checking up on foreman's passing of defects

A very good cloth setter can be made from the heavy steel ribbon taken from the shafts of a wire-heddle frame. A diagram, Fig. 2, showing this setter will give a clearer idea as to how to secure it to the breast beam of the loom. It should be taken into consideration that after the loom sets for a considerable period, the setter is not correct. To secure the proper results with this setter, the following procedure should be followed: After starting up the loom in the morning, run the loom for about ten minutes and see if the setter is adjusted correctly. If not, stop the loom with the one shuttle in the plain side, the lay back center. Now take hold of the pick wheel and let it back a half revolution, or at least twenty picks if possible. Bring the pick wheel back to the exact position it had been in. Bring the setter up against the nail as shown, and adjust so that two picks will show in front of the setter. For the balance of the day, two picks should be given after every set. In order that positive results may be obtained from this handmade setter or from any manufactured setter, it should be adjusted faithfully every day, and should be adjusted also for every new warp that is placed into the loom after it has been woven for five yards.

Notice that the setter is bent up in the front at the point. This is done in order that, if the setter has been left on the front of the cloth and the reed should accidently strike it, no damage to the reed will be done. A small rubber band as shown in the diagram on next page tends to bring the setter back and prevent its striking against the reed.

In setting the loom after ripping out a defect, the weavers often let the cloth back farther than is necessary and thereby cause a very bad set mark. In letting the cloth back in this manner, the sides are often forced to a greater extent under the pressure roll on the front of the loom than is the center of the cloth, with the result that, when the cloth has been stretched tight by lifting the weights, an uneven appearance and a set mark hard to overcome are found. The same bad join will also be caused in like manner if the cloth is on one half of the loom tight and on the other half loose. When the cloth has this appearance, it is advisable to release the thumbscrews on the pressure roll and loosen the cloth so it will slide back as evenly as possible; in this manner a better set can be made.

Use of Water

However, at times the only possible manner in which to make a set which is anywhere near perfection is to use water on the woven part of the cloth. By using water I have made sets that were considered impossible because of an uneven join of the cloth. The more surface on the cloth covered with the water, the farther back the woven cloth will stretch. This fact can be more readily understood than how to apply the water in order to set the cloth properly.

When making a set with the uneven join, bring the reed up against the cloth so it is front center and set the cloth in the best manner possible, without having any part of the cloth tight against the reed. The part of the cloth that is farthest from the reed should be dampened with water. Put the water on all places where it is desired to force the cloth nearer to the reed. As the silk becomes wet from the water, it will stretch to the desired position, and an excellent join will be the result. Water should never be placed on the woven material unless it is uneven as described above.

Another method for eliminating set marks is by using water on the part of the shed out of which the woven picks have been taken. Supposing a weaver rips out two inches, makes a perfect set, and starts up the loom. After the loom has woven the picks back into the place from which they have been removed, a loose mark will be left at the place where weaving ceased before the rip-out. This is due to the picks falling back into the respective creases which they formerly made.

This loose mark can be overcome as shown in Fig. 3. After the rip-out, the loom is set and allowed to weave part of the distance to extremity of the rip-out. After this the loom is stopped and a damp cloth is wiped on the unwoven part of the rip-out and past the extremity. The loom is then run for one pick and the same procedure is gone through with once more. After this the loom can be started up and will not leave any light join. Tight starting marks ripped out and damped in this

manner will also be woven more perfectly and little trace of them will be left—in fact the tight mark will often be entirely eliminated by this method.

Some mills use soaking oil for the above remedy in place of water. Kerosene and benzine are also used and have proved satisfactory. The best thing that has ever come to my attention, however, was disclosed to me by a Frenchman who had used it for years with very good results. He took a teaspoonful of boric acid and dissolved it thoroughly in a pint of water, applying it in the manner I have described for water.

Rainbows and Broken Picks

If a weaver has trouble with a wavy appearance in the cloth, often known as "rainbows," after setting and starting up the loom, it is best for him to set the loom and run several picks, say about four, after which he should dampen the unwoven portion with the solution of borax and water. After this procedure no traces of the wavy set will appear. It should be thoroughly understood that no water should touch the woven part of the material and that the rag used in dampening the silk must be wrung out as nearly dry as is possible with the hands. The silk after being damped with the solution should be left to dry if it is to be a satisfactory set. After a weaver has been instructed in the use of this method he will surprise himself with the improvement he will be able to make.

Broken picks can be likewise treated so that not a trace of them will show. As is known, broken picks are a very serious problem today in many mills, especially those weaving material having a hard-twist filling from four-thread up. The heavier the thread, the more noticeable is the crack left by the broken pick. Only by the use of water or by brushing the tight pick back into place can the defect be covered up. Brushing the pick in with the pick-back is a very poor remedy and should not be adopted if the trouble can be overcome in any other way. One method adopted in such cases is to set the loom so that from two to four picks will be forced in tight. Some set the pick wheel back four picks or more before attempting to bang the broken pick out even, and still cannot overcome this defect.

In taking the crack out after a broken pick, remove the broken pick and find the correct pick for starting up the loom. Now use the damp rag and brush downwards from the fell of the shed to the woven pick, up and against the tight pick. It will only be necessary to dampen the part of the broken pick that has not been woven up, as this is the part that generally leaves traces of a crack or shire. After once becoming used to the manner of taking out defects with the water and borax, it will be a simple matter to make perfect set marks.

It is very important that in experimenting with joining marks all these experiments be made at the start or the finish of a cut as many defects will be caused by fixers trying to find a remedy in the center of a cut or other places in the cut before it has been marked off. At times it might be necessary to change a rope or the weights, or to change the warp to a different position. In such cases the loom should be left to run until the cut mark is woven up, unless the change is absolutely required. Changing a warp to a new position will give an uneven tension to the entire width of the warp; while in changing a rope of weights, the one side of the warp will be shifted.

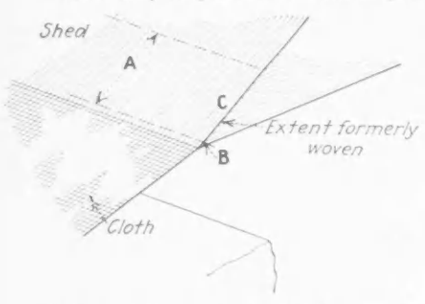


Fig. 3. After weaving back to B, dampen area A, or cloth will have a loose mark at C

Looms that have the pressure roll in an exposed position will also be found to leave starting marks every time the weaver leans against the roller. Weavers running such looms should be cautioned against such a practice. As the weaver leans on the roller, a tight mark will be left; and as he moves away from the roller, a light mark will result. I recall once fixing a section of this type of loom when a weaver would continually recall me after I had left him. It took several hours to find the real cause of the trouble, and this was only accomplished by my moving on to other looms and watching the loom in question from across the aisle.

Speaking of the rollers, the take-up roll and sand roll should work in unison with each other correctly in order to bring out perfect pieces; but once the friction on the roller ceases to function properly, starting marks will be the result.

In the case of a loom which leaves a starting mark after it has been idle for an hour or so, the cause of the trouble will sometimes be found in the take-up friction. The friction disc on the drum shaft has a small pin to

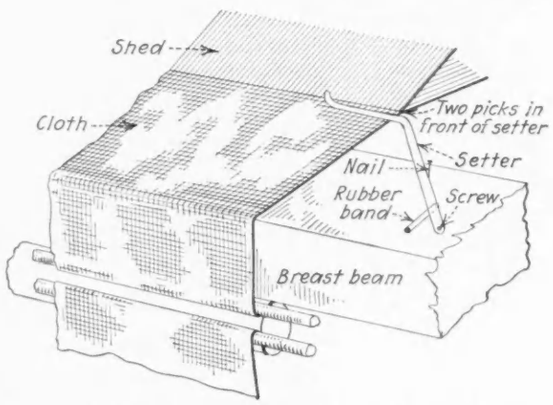


Fig. 2. Homemade setter for eliminating joining marks

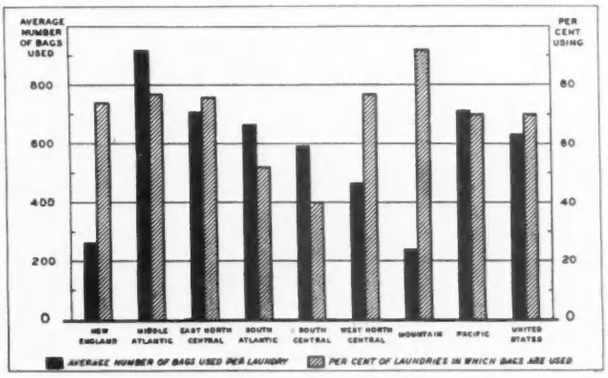
secure it to that shaft. After a loom has been running for a number of years, it will be found necessary to renew this small pin, which can be made from almost any material found in a fixer's supply kit. The old pin will be found worn to powder by its long service, and a renewal will help eliminate starting marks.

The leather disc in the friction disc should be replaced if the old one is worn thin. At times oil seeping into this part will cause undesirable slippage; and after the parts have been properly cleaned, a small amount of stove polish rubbed over the disc will let it slip and still retain the gripping tension that is required.

Another important part on the friction is the handwheel and the notched flange on a well-known make of loom. If this handwheel is too tight, it will at times cause a jerky motion of the take-up, forcing the take-up roll to pull the cloth entirely too tight in winding it up and thereby causing shirey cloth, which is also classified as "barré" by some mill men. If the handwheel is too loose, the least slippage on the sand roll will cause

(Continued on page 40)

Power Laundries as Consumers of Cotton Goods



Average number of bags used per laundry and per cent of laundries in which bags are used by geographical divisions

IT IS ESTIMATED that the power laundries of the United States consumed about 52,000 bales of cotton of 500 lb. gross each, in 1928, according to a study made by the U. S. Dept. of Agriculture, Bureau of Agricultural Economics.

The greatest quantity of cotton was consumed by the use of wash nets, for which the estimate was 14,900 bales. The item of second importance was twine, which accounted for 9,000 bales. Other items, in order of their importance for the estimated quantity of cotton consumed, were as follows: Padding, 7,300 bales; sheeting, 7,000 bales; laundry bags, 5,500 bales; cover duck, 4,800 bales; and double-faced felt, 3,400 bales.

These estimates do not include cotton consumed by laundries through bags in which supplies are received. If it were possible to arrive at satisfactory figures for this item, the total cotton consumption by power laundries would be considerably larger.

Possibilities of Increase

The study indicates that the laundry industry is an important consumer of cotton. Increases in the use of cotton may be brought about by more extensive uses of cotton fabrics than now exist and by increases in the size and number of laundries.

A considerable increase in cotton consumption would result, if the 30% of laundries indicated as not now using cotton bags were to use them. Further increase would come if all now using bags would use them to the fullest extent. Apparently an economical means of supplying such an increase would be through the use of cotton bags, suitable for laundry bags, as containers for soap chips and other supplies.

If the number of sizes of bags used by laundries could be reduced to a few standard sizes, reduced cost of production would no doubt result and this reduction could be reflected in lower prices of bags to laundries. Approximately 75 different sizes of bags were being used by the laundries reporting to this study, with the 30x40-in. bag constituting more than one-third of all bags in use. The difficulties that laundries meet in collecting and keeping their customers supplied with bags, apparently accounts, in many instances, for the fact that they are not used more extensively. Of those which reported that they supplied bags to customers free of charge, 50% reported difficulty in collecting the bags, 6% reported that they made no attempt to collect the bags, and 44% reported no trouble.

Bags Reduce Claims

It was suggested that the use of bags by routemen for the collection of laundry reduced the claims made by customers based on the following: Torn pillow tubes and sheets that are often used by the housewife as containers; spots and other damage, caused by bundle coming in contact with grease and other materials; loss of small articles during collection and delivery. In addition to bags used by laundries, or furnished by them to customers, many bags are purchased by housewives, students, etc., from sources other than laundries. No data were obtained on the number of bags purchased this way, but it is thought that this would be an item of no small consequence.

The survey indicates that approximately 96% of the power laundries are using nets to some extent. This suggests that the increased use of nets by those not using them to the fullest extent offers the only possibility of increasing the consumption of cotton through the use of wash nets.

Although 76 different sizes of wash nets were reported in use, more than three-fourths of all reported were the 24x36-in. size. The size next in importance, 18x30 in., accounted for 5% of the total in use.

Other Forms of Use

Other important forms in which cotton is now being consumed in power laundries are the materials used on presses and ironing boards, such as padding, sheeting, double-faced felt and cover duck. Most laundries use either padding or double-faced felt, and many use both. Practically all use either sheeting or cover duck and a large number use both. These materials were not used by laundries that render wet-wash service exclusively.

Perhaps the most promising means of increasing the consumption of cotton by laundries is the use of cotton bags as containers for shipping laundry supplies. It is significant that all laundries reporting the receipt of soap chips in cotton bags, stated that they preferred cotton bags for this purpose. Only 6% of all starch used was shipped in cotton bags, with 3% of the laundries reporting that they had received starch in cotton bags and 15% expressing a preference for such a container for starch.

Simple Thread-Tension Devices Aid Elastic-Fabric Mills

By J. L. Alden

ALL makers of knit or woven elastic goods thoroughly appreciate the importance of uniform stretch of the covered rubber thread. From the standpoint of quality of the woven product, it is as necessary that the stretch of the thread from spool to spool be uniform as it is to have the stretch conform to an arbitrary specification. Moreover, if perfect fabric is to be produced, not only should the stretch be uniform, but also the stretch per unit load in tension. The latter factor is generally ignored, but its effect has been experienced by every weaver of elastic fabrics.

Fig. 1 illustrates the effect just mentioned. A piece of webbing is clamped in jaws *j*. Similar jaws, *k*, from which may be suspended weights, *w*, are clamped to the lower end of the strip. If the warp-ends in the left side of the web yield less under a given load than do those in the right, the addition of weights to the lower clamp will produce the biased stretch shown at *b*. The condition illustrated is generally due to irregularities in the bare rubber thread, such as dimensional variations, and irregularity of compound or cure.

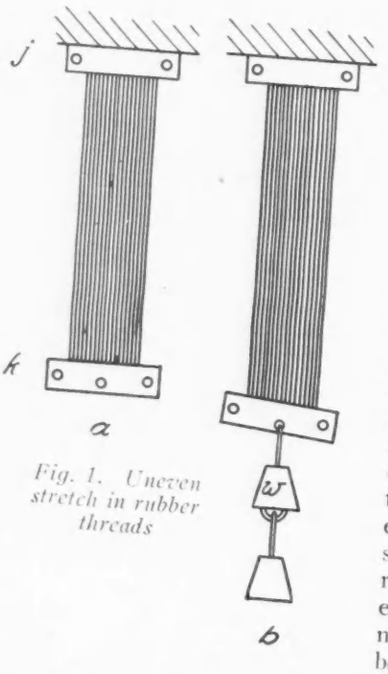


Fig. 1. Uneven stretch in rubber threads

The covering of rubber thread is a simple operation. Nevertheless, there are substantial difficulties in the way of producing a regular and uniform product. We may, however, set down some fundamental conditions which must be met, as follows: (1) bare rubber of uniform physical properties, (2) bare rubber of uniform dimensions, (3) bare rubber uniformly stretched always to the same point on the stress-strain curve, (4) cotton yarn of uniform diameter, (5) uniform tension of winding of multiple-end ribbon of yarn, and (6) uniform tension in the yarn on the cotton covering machine as measured at the point of application to the rubber. Lack of uniformity of any of the foregoing items will cause corresponding variations in the stretch of the finished product. As a matter of fact, all of them vary all of the time, making necessary more than ordinary care in the selection of raw materials, close attention to their preparation for the cotton covering machine, and careful adjustment of the machine itself.

Variations in Rubber Thread

Bare rubber thread varies both in composition and in dimensions. The variations are not only from thread to thread, but also from end to end of a single thread. Variations in physical properties occur in rubber compounded in different batches, calendered on different days, cured in different vulcanizer charges, or even cured in the same charge but in different locations in the vulcanizer. Dimensional variations are due to errors in calendering or in slitting. The thickness of a single sheet may vary 0.001 in. from edge to edge or end to end. This is sufficient to cause a change in stretch of $\frac{1}{8}$ in. in a piece of No. 32 covered rubber thread whose nominal stretch is from 3 in. to $8\frac{1}{2}$ in. The spacing of slitter knives may be in error as much as 0.001 in., which, added to the "run-out" of knives and arbors, and the normal difficulties of handling sheet rubber, produces variations in the width of the thread of as much as 0.003 in. The errors are proportionally greater in the smaller sizes. It is not unusual to find rubber the sum of whose dimensional errors totals 10% to 13% of the nominal. With such a rubber it would be necessary to change the adjustment of the tension device by a like amount in order to produce the required stretch. The fact remains, however, that since some of the rubber is on the light side, the operators, in order to avoid breakage and consequent loss of piecework earnings, adjust tensions to suit the weakest rubber, thereby understretching the majority of the work. A further variable is produced by dull slitter knives which turn out saw-toothed and ragged thread. Breakage of thread with ragged edges always starts at a saw tooth, and the strength is substantially less than that of perfect thread. Experienced operators always ease off the tension on ragged rubber.

In relaxing from the stretched condition, covered rubber shortens in length until the cotton strands of the cover crowd firmly together. Heavy counts shorten the stretch because of the wider ribbon, which will not permit the thread to collapse so far. Lumps, slubs, spinner's knots, and similar enlargements have a similar effect in producing local shortening of stretch. Obviously, a level yarn or a ply yarn makes for greater uniformity of covered rubber.

Irregularity in Tension

Irregularities in tension of winding the multiple-end ribbon causes crossed ends, which, in turn, cause local increases in stretch. While the errors in stretch due to variations in cotton count and tension are purely local, nevertheless they materially increase the difficulty of obtaining a uniformly smooth and good looking product. Still another factor is the tension in the cotton ribbon

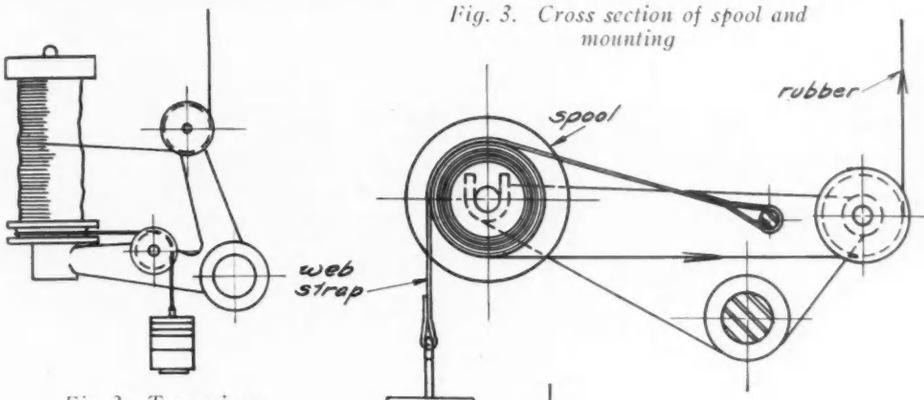


Fig. 2. Tension produced by drag on spool

Fig. 3. Cross section of spool and mounting

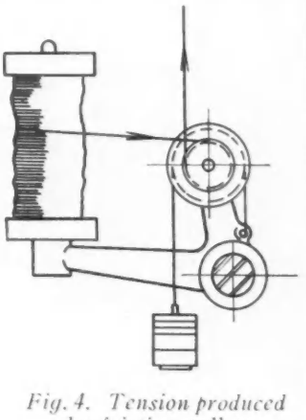


Fig. 4. Tension produced by friction pulley

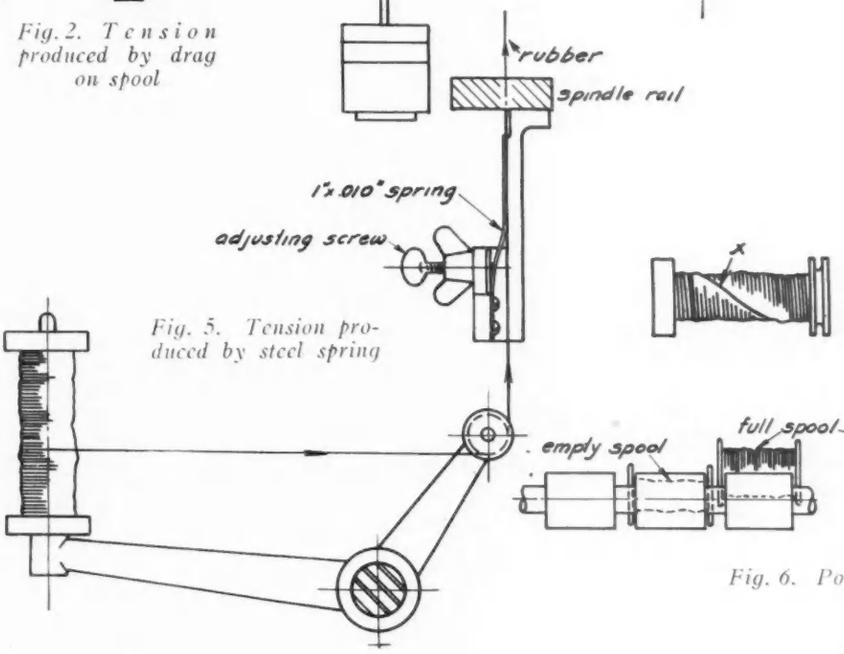


Fig. 5. Tension produced by steel spring

Fig. 6. Power-driven let-off

at the point of application to the rubber. The tension is ordinarily greater for an empty package than for a full one. The tension when unwinding from the top of the cop is different from that at the bottom. Roughness in the spindle drive is a common source of cotton jerks and tension irregularities.

It may well be asked, why, when the title of this article refers to thread-tension devices, is so much space devoted to a variety of apparently minor factors relating to the stretch of the finished rubber? The answer is that these factors are not minor; that their influence is often obscure and generally neglected; and that the tension device is frequently credited with being the sole source of spoiled work, when any one of the supposed secondary influences is capable of causing variations beyond the acceptable limits. In the following paragraphs will be described a number of tension devices, any one of which will produce good rubber thread if the other factors are kept uniform. There is a great deal of superstition about let-off tensions, and each knitter or weaver has at least one pet design without which he believes good rubber cannot be made. Actually, there are dozens of possible designs and the choice between many of them is entirely a matter of opinion.

Rubber thread may be tensioned by applying friction to the supplying spool, by applying friction to the thread itself, by requiring the moving tensioned thread to overcome a constant resistance, or by feeding into the machine an amount of rubber which is definitely less than the amount pulled out by the delivery roll. In Fig. 2 is shown a spool mounting adapted to tension the rubber by means of a drag on the spool. A flexible cotton or leather thong, one end of which is anchored, is wrapped 180° around a groove in the spool head and attached to a hanging weight. Since the friction acts on a constant diameter only, this let-off is useful only when there is but little difference in diameter between the spool barrel and the head. Otherwise, in order to produce a reasonably constant tension in the rubber, it is necessary to remove weights as the spool runs out. Fig. 3 shows a cross section of a spool and its associated mountings. Here the rubber is tensioned by means of a weighted strap hung over the spool barrel. Since the pulling radius and the friction radius are the same, the tension is maintained uniform, except for the friction of spool spindles and guide pulleys, regardless of the degree of fullness of the spool. When using this type of tension, the spool must be evenly wound or the area of rubber in contact with the strap will vary widely. There is also a tendency for the weights to swing in regular cadence,

owing to the alternate grabbing and slipping of the tension strap. Swinging weights accentuate the tendency to grab and slip.

Friction Pulley

The tension device shown in Fig. 4 consists of a pulley revolved by the rubber from the supply spool and braked by the brake sheave, strap and tension weight. The pulleys are usually from 2 to 4 in. in diameter and should be mounted on ball bearings or should run on shafts not over $\frac{1}{4}$ in. in diameter. It is not possible, with the design shown, to take more than one wrap of rubber around the pulley. To increase the frictional grip it is necessary to use either a pair of pulleys, at least one of which has a number of grooves, lacing the rubber in "figure eight," or to use a single V-grooved sheave with an included angle of V of not more than 15°. The rubber will pinch in a groove of the latter proportion and will drive the sheave without slip if the angle of wrap is much more than 180°. Occasionally the friction pulley is replaced by a power-driven capstan or feed roller. If the feed-in roll is driven at about one-sixth the speed of the delivery roll, the rubber thread will be subjected to approximately full stretch. Fig. 4 and all of its variations have the fault that the rubber must be fed to the tensioning device under a slight initial stretch in order to maintain tautness and a tight grip. Irregular winding, the change in pulling radius from a full to an empty spool, and the change in angle in pulling from the top and bottom of the spool all conspire to change the tension in the strand before it reaches the tension device.

At one time the author attempted to tension rubber by reducing it to a definite cross section by pulling through a polished hole in a steel die plate. Such a device is difficult to string up and will not, of course, pass knots. A modification, as shown in Fig. 5, will make satisfactory thread if properly adjusted. It consists of a flat steel spring pressed tightly against the rubber thread as it passes over the polished backing piece. A small variation in the physical properties or dimensions of the thread has less influence on this tension than on any of the others described in this article. It is probable that a bell crank and weights provides a more positive and foolproof means for compressing the spring than the thumb screw shown in the cut. Variations in winding have practically no effect on the tension produced by this device. It has the disadvantage of clogging with soapstone, so that it needs dusting at least twice or three times a day. One of its characteristics is a slow creep of the rubber when the machine is idle, so that it is necessary to pull back the rubber by hand when starting after the noon shutdown. Some mills consider this an advantage, since the rubber is not left in the stretched condition.

Power-Driven Let-Off

A power-driven let-off is shown in Fig. 6. The spool rests on rubber-covered cylinders which are geared to run at one-sixth or one-seventh of the delivery roll speed. The rider roll t assists a light spool in obtaining traction. Lumpy or irregular winding, winding tension variations, and similar irregularities cause the spool to deliver varying amounts of rubber in successive revolutions. A widely spaced turn, such as x, will deliver much more rubber than the closely wound turns ahead or behind.

It is probable that none of the present-day tension devices are entirely satisfactory. Like most of the rubber-thread machinery, they are somewhat crude in design and construction. Nevertheless, nearly all will produce good covered rubber thread if the other factors which influence quality are kept reasonably uniform. None of them will turn out a satisfactory product in the hands of careless operators, under poor supervision and indifferent management, with mixed lots of rubber of all conceivable dimensions, and attached to machines of poor design and in poor repair.

Starting Marks

(Continued from page 36)

starting marks which are very puzzling to fixers who do not thoroughly understand the correct functioning of the take-up friction.

The fixer who understands this part can often tell by the feel of the cloth between the pressure roll and the take-up roller whether the friction has the correct tension. I would suggest that all fixers who do not understand this part make a practice of feeling the cloth as mentioned when working on a loom and so become accustomed to the feel. If the material is stretched too tight, the friction needs to be loosened by the handwheel; if it is too loose, the friction should be tightened up. Never force the handwheel, as the knobs are easily broken off with undue pressure. The notched flange that fits between the friction disk and the handwheel should be kept free from waste, as also should the pin and button. If the button is forced out by some tool, it will be broken off; therefore care should be used in working on this part.

Heavy Material

Heavy material that needs a great deal of weight plays an important part with the friction take-up. If the friction disk does not have the proper tension, the notches on the notched flange will be broken off, and the flange must be replaced with a new part. Stripping of the take-up gears can also be traced to improper friction, as tight friction pulling unduly on the cloth causes the gears to strip. Lightly constructed looms running heavy jobs, such as radium, will often be found breaking down with stripped gears if the friction is functioning improperly.

A loom making starting marks without any apparent reason can be fixed by careful observation of the weights, their attachment to the loom, and so forth. A loom will be found to leave starting marks if it remains idle over night, due to a change in atmospheric conditions. Pulling the pick wheel up a few picks accordingly will eliminate this trouble. On a loom that requires the pick wheel pulled up four picks or any other amount, it will be found that the same amount pulled up the next morning will answer the purpose.

It is up to the careful observations of the section fixer as to what is making the starting marks, and his suggestions should first be tried out before discarding them. A little study on his part and putting his shoulders to the task will eliminate more starting marks than most experiments can do. A few instructions to the weavers and seeing that these instructions are carried out will prevent many tight marks that otherwise would cause imperfect merchandise.

Specifications for Fabrics to Be Rubberized

By S. G. Byam and L. R. Bailey

FOLLOWING their discussion of the width, thread count, weight, and tensile strength specified for piece goods to be rubberized, the authors now describe the specifications governing fabric defects and percentage of sizing material in gray goods. The previous installments appeared in June 14 and 28 issues of TEXTILE WORLD.

IN ADDITION to the natural oils and waxes inherent in raw cotton, woven fabrics usually contain varying amounts of sizing. This sizing, which is introduced to aid in the weaving, is mainly starch, though it also may contain glucose, gluten, glue, wax, or similar materials. The amount of sizing added in the slashing process depends upon the concentration and temperature of the bath, the speed with which the warps pass through the solution, the sizing materials used, the type of yarn, and the construction of the fabric.

On the surface of the warp sizing forms a coating, which resists abrasion and also tends to keep the yarn free from loose fibers. Since the introduction of too much size is as detrimental to weaving as is insufficient sizing, most mills use only enough to allow proper weaving. For various reasons, however, some mills have the tendency to oversize. This divergence in practice gives rise to variations in the amount of size in fabrics of the same construction manufactured by different mills.

Removal of the sizing materials in the processes of desizing, bleaching, or dyeing causes a difference in weight between gray goods and finished fabrics of the same construction. Where this loss in weight varies to an appreciable extent, it is difficult to set the coating machinery to compensate for the variation and, in fact, may unbalance the coating fabric. In establishing specifications for fabrics to be rubberized there has been included, therefore, a clause limiting the percentage of sizing, waxes, and oils present in gray goods.

Sizing—The maximum percentage, by weight, of sizing in gray goods shall be specified in the purchase contract for each type of fabric. It is recognized that as little sizing shall be used in the fabric as is necessary for its manufacture. Finished goods must be soft or rag finish unless otherwise specified.

There is no attempt to instruct the mill in the proper manufacture of cotton goods. The maker always is assumed to know more about his product than the user. Specifications should always be set up on the basis of service, rather than on the details of manufacturing process. The burden of building a fabric to meet the user's needs should be left to the mill, once it has been given the requirements to be met by the fabric. Therefore in setting a maximum for the percentage of sizing, waxes, etc., there is no attempt to hinder the proper manufacturing of the fabric.

In the matter of sizing the main cause of difficulty is the variation, as the fabric from one mill may lose 10% and from another 20%, or the pieces from the same mill may vary. To give an example, a fabric weighing in the gray 10 oz. per running yard is coated in the gray with 16 oz. of coating to give a 26 oz. finished fabric. Then if it be desired to duplicate this same material with a dyed back and with the same weight and character of coating, more coating will have to be added, or a heavier fabric be used to make up for the loss in weight in the dyeing. Usually it is safe to figure at 10% loss in weight, or, in other words, the dyed goods would weigh 9 oz. This is figured on the removal of 8½% sizing and waxes and a stretch of 1½%. This loss of 1 oz. is made up in the coating; but if there is a loss of 20%, or 2 oz., as sometimes happens, there must be 18 oz. of coating applied. This will also tend to unbalance the coated fabric, as the extra coating makes it stiffer.

Some print cloths, in fact, have been found to lose up to 25% of their gray weight when given a pure bleach and rag nainsook finish. Of course, bleaching removes more than the sizing and waxes, taking out also short fibers, lint, and other impurities. This percentage loss seems too high, however, and it is probably due to excess sizing on the part of the mill, though some of the loss may be due to the removal of short-fibered cotton.

While no mill would be safe in guaranteeing a minimum loss in weight due to the removal of these elements, because of its lack of control over the finishing operations, still it should construct the fabrics so that a given construction finished in a given way will lose in weight an amount which can be forecast with some degree of accuracy.

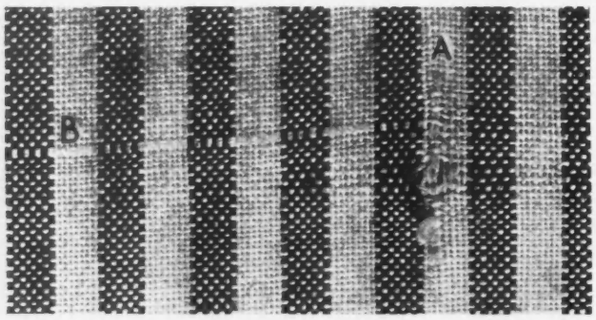
The amount of sizing introduced into well-built fabrics depends on the construction, type of yarn, etc. The higher the count fabric the greater the percentage of size needed in the warp. A fabric with 60 picks needs more sizing than one, identical in other respects, with 40 picks. Also a plain-woven fabric should need less sizing than one made with more complex weaves, due to the simpler motions of the harnesses. Each fabric should be made with a sizing percentage dependent on the needs of that construction. As long as the minimum amount of sizing is introduced the user can have no objection. One mill furnished figures on fabrics covered by these specifications:

Fabric	Per Cent Warp Sizing	Per Cent Warp in Fabric	Per Cent Sizing in Fabric
Drills	10½ to 11	60 to 75	6.3 to 8.35
Sheetings	9½	60 to 75	5.7 to 7.125
Sateens	10½ to 13	60	6.3 to 7.8
Broken twills	11½ to 12½	40	4.6 to 5

However, there is probably a shedding or breaking off of size in weaving of about 2 to 3%. Taking 2½% as the average, this figure subtracted from the percentage of size originally added to the goods gives the following figures, using 3½% as the probable average of waxes and oils:

	Per Cent Sizing in Fabrics	Per Cent Total Sizing and Wax
Drills	3.8 to 5.85	7.05 to 9.10
Sheeting	3.2 to 4.625	6.45 to 7.875
Sateens	3.8 to 5.3	7.05 to 8.55
Broken twills	2.1 to 2.5	5.35 to 5.75

Another house has suggested the following figures, estimating



Defects in fabrics. A, broken warp threads; B, heavy filling threads

in each case that the warp in the fabric has about 10% size after the shedding due to the weaving:

	Warp Equals Per Cent of Fabric	Per Cent Sizing in Fabric	Per Cent Sizing and Waxes
Sheetings	52	5.2	8.45
Drills	60 to 70	6 to 7	9¼ to 10¼
Broken twills	49	4.9	8.15
Sateens	55 to 70	5½ to 7	8¾ to 10¼

(Waxes figured as 3¼ per cent.)

It will be noted that these figures are somewhat higher than the previous set of figures. There is a considerable difference due to the mill practice. One mill feels that a certain percentage of sizing is necessary for proper weaving based on the yarn size they are using in the warp, the sley, or the picks in their method of building the given construction. Another mill has different ideas. There is probably also a different method of determining how much size is introduced and in estimating the loss due to shedding.

From this basis we should set up a limit on drills of 9% as a fair working basis of content of size and waxes, in sheetings of 7¾%, on sateens 8½%, and on broken twills of 5¾%.

Raw cotton contains natural oils and waxes of vegetable origin. The cotton fiber is coated with a waxy substance, supposed to be somewhat similar in nature to carnauba wax, which resists the effect of water. This is what renders unbleached cotton so non-absorbent. There is also present an oil similar to a cotton seed oil and sometimes some cotton seed oil from the crushing of the cotton seed in ginning. The total percentage of these in raw cotton does not run higher than 4% in most types of cotton and probably averages about 3% to 3½%. This percentage can be determined by extraction with carbon tetrachloride or by treating with hydrochloric acid and then sodium carbonate solution. The presence of these waxes and oils have little effect on coating, though it is sometimes advisable to remove them for special purposes. The fabric cannot be dyed satisfactorily without wetting out or removing some of these waxes, so that the dyestuff can penetrate more evenly. While mineral acids are detrimental, due to their effect on the coating and to their tendering effect on the fabric when heated, vegetable acids and oils as found in cotton do not seem to be objectionable. The oils and waxes represent the fixed removable content, as the variation is usually less than 1%; while the sizing is the variable removable content, depending on the amount introduced by the mills.

Determination of sizing in cotton cloth—

1. Extract the sample used for the moisture determination (3 to 5 grams) for six hours with carbon tetrachloride in an underwriter's extraction apparatus.

2. Transfer the extracted sample to a tared weighing bottle, place in hot-air oven at 80° C. until weights show constant, loss in weight represents grease, waxes, etc.

3. Place the sample remaining from the above determination in a 250-c.c. low-form beaker and cover with a 5% aqueous solution of diastafor.

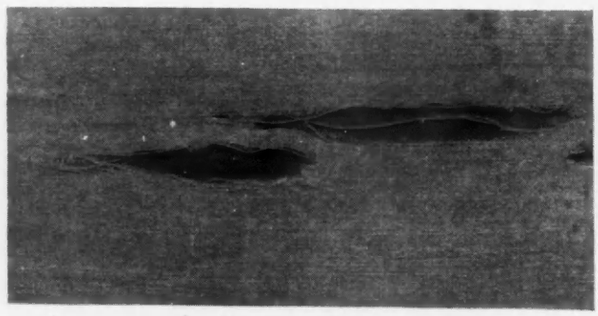
4. Raise the temperature of the solution to about 35° C. and allow to digest for about one hour.

5. Decant the liquor, taking care to avoid loss of loose fibers or yarns, and boil the fabric with repeated changes of distilled water until the liquor shows clear and does not show a positive test for starch with a few drops of dilute iodine solution.

6. Transfer the fabric to a tared weighing bottle, place in hot air oven until there is no further loss in weight.

7. Calculate the residue as bone-dry fiber.

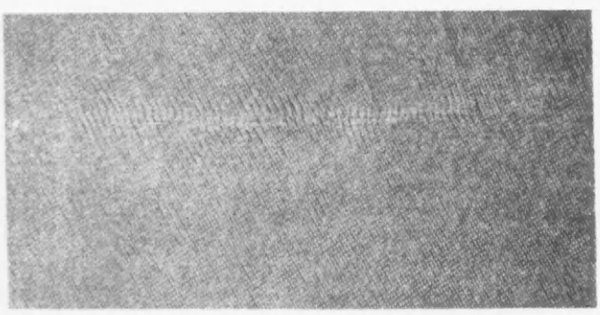
We do not believe that there is any known method of determining exactly the actual size and wax content of a fabric after it has been woven. What we do seek, however, is a method of extraction or determination which will, within a fairly narrow limit of accuracy, be dependable insofar as the proportion of size and wax content removed is concerned. Whether all the size and wax is removed is immaterial; but if we could know that any given method would show an unvarying result on a known sample in tests made at different times, we could have some basis for calculation. It will be understood everything is predicated on the user's point of view; that is, how much loss will there be in finishing, not on the mill's point of view, how much size has there actually been introduced. Whether there be 6% or 15% sizing is beside the point from the user's point of view; but what he is interested in is: When this fabric is bleached, desized, or dyed, will there be 5 or 20% loss in weight due to the removal of the sizing. Can he estimate what the loss will be by testing samples of the fabric before it is put into process by the finisher, knowing that if his tests show that the sample loses 6% in weight when the size and wax be extracted in the laboratory (whether there be more or less size and wax contained), there will be a loss of not more than 6% plus the loss due to stretch when the goods are processed. Or if a method be not developed to remove as much in the laboratory or more than will be removed in the actual process of finishing, can there be a method developed or is there one in existence which will show a certain relation between actual finishing conditions and laboratory determinations.



Tears and holes in bleached sheeting

If there be such a method, it would save a lot of uncertainty and error in the coater's calculations. Failing this, however, is there any method which will extract an unvarying amount within certain limits from a fabric containing a known percentage. That is, if a fabric is known to contain 10% size and wax, is there a method which will extract 9.5% or, say, 7 or 8% on every test. Using the method recommended in the specifications, one of the gray-goods houses, which technically can be assumed to be of very high character, had results showing 4% size and 8% size on swatches taken from the same head-end. While others must have had better success than this, else this method would not have been adopted, still it is quite a complex method. It would seem that a simpler method could be devised. Some laboratories have had success with treating the sample with a dilute solution of hydrochloric acid. We would be much interested in hearing what success has been had with different methods.

Having standardized on a given method of determination, it would seem practicable as well as possible for the users to agree on some definite maximum percentage of sizes and waxes which the mills will have no difficulty in meeting. However, the purpose should be not to make the specification so strict as to raise the cost of the goods, but rather to define the character of standard, good-quality fabrics.

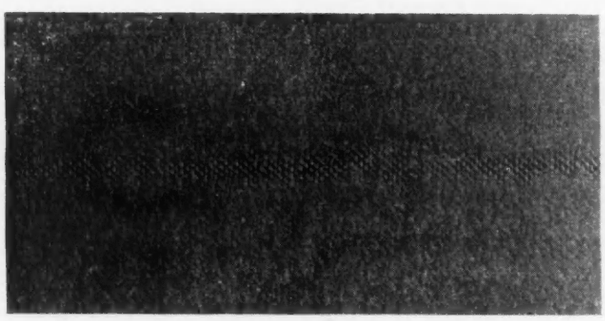


Defect in warp-knitted fabric

Defects—Cotton goods purchased under these specifications will be used in the manufacture of rubber-coated fabrics and the vendor, in the manufacture and inspection of these goods, shall endeavor to meet the requirements of this industry. All fabrics shall be inspected and burled on both sides. Certain defects shall be classified as major defects and shall not occur in a roll on an average of more than one defect to every 15 yd. A minimum allowance of ¼ yd. will be made for each major defect. There follows a list of those defects which are classified as major at the present time: smash, washed-out oil spots, starchy places, group float, heavy filling, shuttle mark, heavy warp, and kinky filling. These defects are probably not all which should be listed so that this list is subject to change by common agreement. Also one major defect on the average of every 15 yd. does not represent the quality desired, but has been suggested as a fair basis both to mill and to consumer. The aim of the mills will be to so improve their quality that this average between defects may be increased.

The following shall not be present in goods offered to this industry; oil spots, holes, or torn selvage.

One of the chief difficulties encountered in discussing defects intelligently by groups of the size of those which considered this specification is that of definition. While fabric imperfections may have well established names among the textile trade, such is not



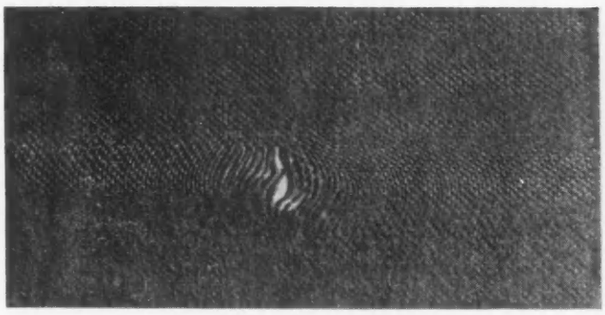
Poor napping—streaks

the case among the users. Those defects which could be properly identified and agreed upon as serious are mentioned. In general any variation in the fabric which weakens the material, or causes the rubber coating to be non-waterproof at that point or makes the rubber coating or the exposed backing unsightly or non-uniform constitutes a defect. Most of such defects, if present in the finished goods, must be cut out or at least allowed for to the customer.

The data on which this specification is based were collected from the examination of a considerable yardage of fabric over a period of some months and indicated that one major defect of the sort mentioned was found in about every 12 yd. It must be conceded that this is too frequent occurrence for really satisfactory goods. The first tolerance laid down was for one defect to 30 yd., but after consideration it was decided to adopt the lower limit for those goods to be used for automotive purposes. For general proofing the tolerance reads as follows:

Not more than one major defect may occur in each 20 yd. Material shall contain no markings of any kind that will not be removed in the ordinary process of finishing. Gray goods shall not contain torn selvages, holes, or tears. Major defects are: heavy filler threads, heavy warp threads over 2 in. in length, missing threads in both warp and filling, oil spots, uneven weaving causing bands and bars, and sharp creases.

In commenting on these defects one textile house states that it considers sharp creases a debatable defect. From the rubberizer's point of view there is nothing debatable about it, as he knows that sharp creases will show through light rubber coatings and constitute a defect in his finished product. Fold marks which are not sharp often pull out and do no harm; creases never do. The



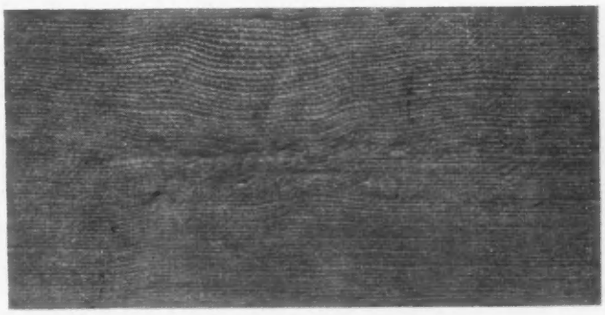
Broken warps in napped fabric

effect produced by uneven weaving, which produces bands or bars, is objectionable because it becomes more pronounced in appearance by rubberizing. It shows up particularly badly when a fabric is coated with rubber of a different color than that of the fabric. The shading in appearance thus produced prevents the sale of that material as first-quality material. The condition referred to is caused by the uneven grouping of the threads, usually in the filling, rather than by broken filling or slightly different colored filling, though these, too, are objectionable. Fortunately, most mills recognize all the major defects listed and are willing to supply their goods on the basis stated.

Selvages—Selvages of these fabrics shall be of uniform width and of equal width on both edges of the fabric. Selvages shall be so made that the tension shall be the same as, and shall lie flat with, the body of the cloth. Baggy goods and curling selvages are cause for rejection. Selvages on finished goods shall be free from scallops.

In handling wide goods the rubberizer has a great deal of trouble if the selvages are tight and thus cause the body of the goods to be baggy or to sag in the center. Such goods frequently have to be calendered in the application of the rubber coating. If the goods are baggy, the middle portion tends to wrinkle between the steel calender rolls and to become cut. Even if cutting does not actually take place, the rubberized material comes out baggy and will not lie flat, unless, of course, the selvages are entirely stripped off. This is not a practical expedient. Torn selvages are impossible, for such material will simply tear at that point; hence the complete firm statement against this condition. Scalloped selvages cause trouble with any kind of rubberizing, but are especially bad when the fabric must be coated on the spreader with rubber cement. The cement, though very viscous, will still flow and will be constantly running off the fabric at the narrow part of the scallop, permitting it to be smeared on the spreader roll and then on the back of the fabric being coated. Scalloped selvages produce sloppy rubberizing, and the rubberizer's only alternative in such a case is to rubberize so far in from the edge that the trouble described will not occur. Heavy selvages, that is those selvages that are actually much thicker than the fabric itself, will often grind and cut when passing through the calender rolls or scrape when passing under the spreader knife, producing in either case unsightly and ragged edges. Goods with flat, even selvages are a boon to the rubberizer and please him greatly. Selvages that are looser than the body of the goods are probably possible to obtain, but are rare in our experience. They would be detrimental to the finished product, in that they would wrinkle and cut in calendering and spreading, much as the center does in the case of tight selvages.

(To be continued)



Heavy filling threads

Printing with Metallic Powders

By Raffaele Sansone

ALTHOUGH many manufacturers have neglected the production of prints with metallic powders, a number of concerns have paid considerable attention to this practice. The methods employed in producing this type of print are not complicated and the equipment needed is comparatively simple. Designs may be produced in gold, silver, bronze, and other effects. Fabrics printed with metallic powders are particularly adapted for the manufacture of costumes for the theater, pageants, carnivals, masquerades, and similar uses. They also find some application in women's and misses' sportswear.

In Fig. 1 is shown a costume fabric that has been favorably received; it allows the production of attractive costumes, and at the same time is relatively inexpensive. The fabric is a cotton sateen of medium weight, dyed in black, navy, brown, or another dark shade; on the face of this cloth bright silver diamonds have been printed with their points touching one another. The metallic design thus obtained gives the material the appearance of thickness and richness of real satin. Costumes or dresses made of this cloth show good resistance to wear, do not wrinkle easily, and maintain a fresh appearance for some time.

Costume Fabrics

To produce this design a fine aluminum powder mixed with a warm solution of glue or gelatin is applied to the surface of the fabric. Deeply engraved cylinders, with hollow centers which permit heating through the passage of steam, are used for the printing operations. After printing, the goods are passed directly to a backdryer. It is essential that the face be kept from contact with rolls or cylinders until the printed diamonds are dry.

By using a hot and thick solution of glue or gelatin, which hardens when cold, a strong adherence of the fine aluminum powder to the surface of the fabric is promoted. However, for assisting further adherence, the goods, after drying, are given a calendering under heavy pressure. The calender tends to increase the luster already possessed by the cotton sateen. In some cases a schreiner calender is employed, which, of course, further enhances the appearance of the goods.

If the aluminum powder employed is of sufficient fineness, the surfaces of the diamonds are quiet smooth. In one of the printed effects examined by the author the schreiner roll used was so engraved that the aluminum deposit was caused to form inclined lines. In this way the diamonds acquired a glittering shine that increased the attractiveness of the article. In Fig. 2 is shown a magnified view of this fabric.

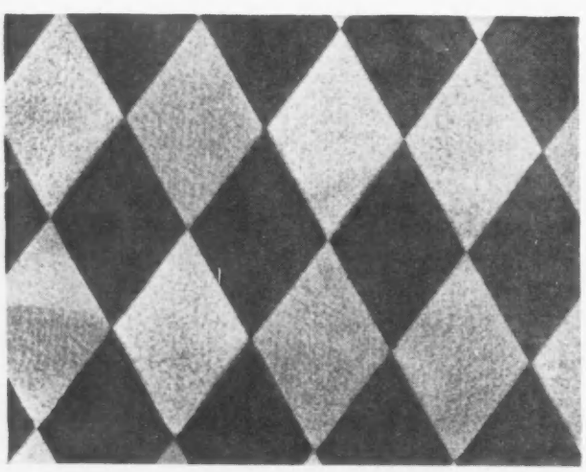


Fig. 1. Diamond-shaped pattern printed on cotton fabric

Clothing Fabrics

The continual search for new effects that will permit the production of novel fabrics for womens' and children's wear has encouraged the use of printing pastes with metallic powders. In this instance, however, the printing has to be conducted with more care than is usually employed in the production of costume fabrics. For example, a more complete fixation of the metallic powders is needed, so that soaping of the fabric will be permissible. At one time only expensive fabrics were treated, the applications of which were limited to religious ceremonies, the theater, and to the clothes of royalty. In such cases powders of pure gold and silver had to be employed; these were applied to the fabric by means of costly methods which were not within the reach of many printers.

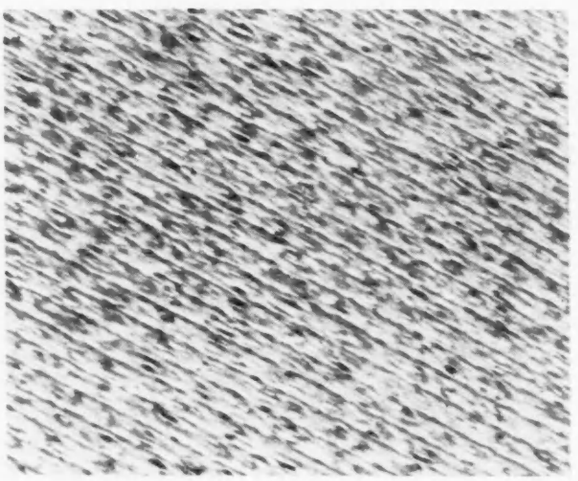


Fig. 2. Calendered fabric printed with metallic powder

At present, however, alloys of gold and silver, or simply fine bronze, copper, brass, tin, and even aluminum powders are used. With these materials satisfactory designs are produced, and the printer can obtain delicate

details with the same facility as he can with any of the color pastes ordinarily employed for producing multicolored designs. The metallic powders are applied with the aid of albumen, casein, latex, resin, bakelite, cellulose acetate, or other special products.

With blood albumen good results can be obtained by printing in the cold, and then submitting the fabric to drying and steaming operations. During the drying and steaming, coagulation takes place and permanently fixes the patterns on the fabric. The fastness to washing and rubbing secured in this manner is sufficient for many purposes. Blood-albumen paste is sometimes prepared as follows: 40 parts of blood albumen are soaked overnight in 57 parts of water; the mixture is stirred until a uniform mass has been produced and is then strained through a cloth sieve; finally, 3 parts of oil of turpentine and 5 to 10 parts of aluminum powder are added.

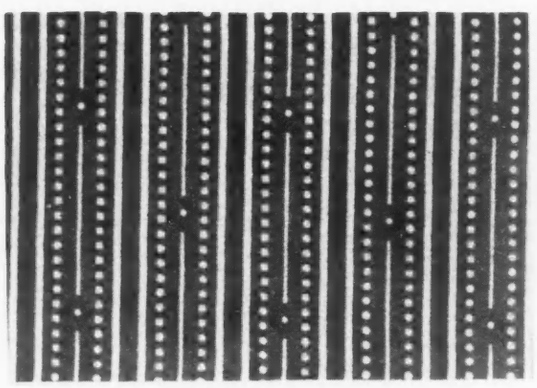


Fig. 3. Discharge printing on dyed fabric

The odor left in the goods by blood albumen in some cases causes complaints. For this reason, blood albumen is sometimes mixed half-and-half with egg albumen, or replaced entirely by the latter product. Use of egg albumen, it should be noted, increases the cost of printing. In other instances albumen is supplanted by a thickening prepared by dissolving casein with a weak solution of ammonia. Here the adherence of the metallic powders is less, although still sufficient to satisfy many requirements. Solutions of rubber in benzene are occasionally employed for the fixation of the metallic powders, the fixation taking place during the evaporation of the volatile solvent.

For producing the finest patterns, solutions of cellulose esters have given considerable success. One method consists of dissolving cellulose in ammoniacal copper oxide, adding the metallic powder in the desired proportion, producing the designs on the ordinary roller printing machine, and eliminating the copper oxide present through the use of an acid. This process is expensive and has been replaced by one using a special form of acetyl cellulose, known under the name of Sericose L. Sericose L is merely a solution of acetyl cellulose in a suitable solvent. The printing paste is prepared as follows: 120 parts of Sericose L are mixed with 240 parts of resorcin and 160 parts of water; 480 parts of denatured alcohol are added; the mixture is stirred and allowed to stand until all the constituents have dissolved; and 150 parts of fine aluminum or bronze powder are stirred in.

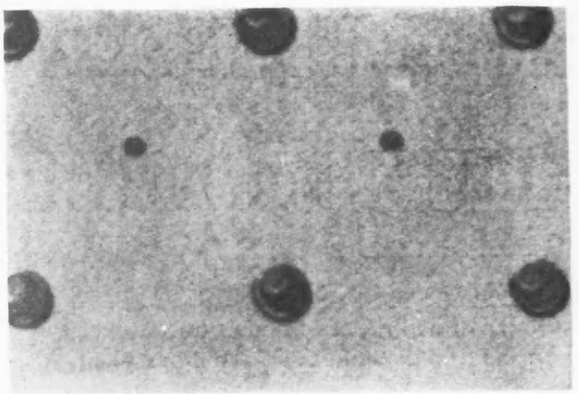


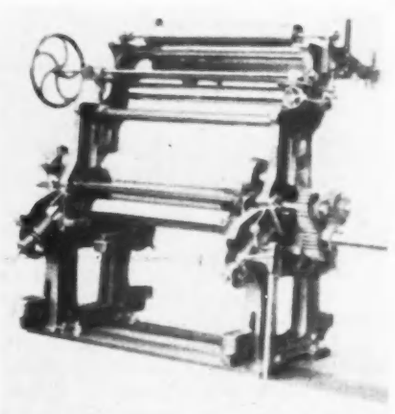
Fig. 4. Decorative effect produced with metallic powder

The resulting paste is employed on any ordinary roller printing machine either alone or with other printing pastes containing basic or other coloring matters. In Fig. 3 is shown a fabric that has been produced in this way. The ground was dyed in a dark shade with colors dischargeable with hydrosulfite; and in printing, in addition to the sericose printing paste, a discharge paste was employed. On a dark blue ground, the following formula may be used for producing green patterns in conjunction with the metallic effect: 20 parts of Rhoduline Yellow 6G, 10 parts of Rhoduline Blue 3GO, 30 parts acetic acid, and 200 parts of gum arabic are dissolved in 200 parts of water free from iron; 100 parts of hyraldite dissolved in 100 parts of water are next added; after mixing well, 100 parts of aniline oil, 100 parts of alcohol, and 120 parts of tannin are stirred in.

The cloth is printed as usual, dried, steamed, and passed through a bath of tartar emetic. If the green has to possess fair fastness, a rinsing in clean running water follows. The goods are then dried, tentered, and calendered to produce the desired finish.

Variety is obtained in this class of goods by introducing colors with the metallic powders. Interesting effects are also obtained by using the metallic powders for adding small details, of the type shown in Fig. 4, on prints obtained with basic or other colors on lightly colored cotton fabrics.

The printing machine shown in Fig. 5 is especially adapted for the application of metallic powders. It is of light construction and low cost, and is directly driven by means of a small electric motor. The machine is equipped with two lower engraved rollers—one for the metallic paste, and the other for the basic-color paste. The pastes, which are contained in copper troughs, are supplied to the rolls by means of circular brushes; steel doctors scrape off all excess paste that remains outside of the engravings.



Printing machine for application of metallic powders

During the printing a pressure bowl keeps the cotton cloth in position against a cushion formed by a back gray, an endless blanket, and a wadding around the bowl itself. Pressure bowl may be raised or lowered by a hand wheel.

OVERSEERS' ROUND-TABLE

THIS department offers a new subject for discussion each week and gives readers' comments on problems introduced during previous weeks. The subject which was opened four weeks ago is closed this week and a summary of contributed ideas is given on opposite page

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Warm Weather Brings Up the Topic of Baseball

Editor, Overseers' Round-Table:

I AM not in favor of a mill having baseball teams or basketball teams or, for that matter, in having annual picnics and the like. There is no question that when first initiated such affairs stir up interest and good feeling, but, as Bill has said, the interest soon slackens and a sick ball team or an unenthusiastic picnic has a much worse effect than none at all.

Then there is the depressing effect when times are hard and the mill is forced to curtail expenditures on such items. I believe that it is of great value to the mill to have its workers have a real organization spirit, but I also believe that the way for the mill to attain such a spirit is through the agency of everyday contacts and fair treatment rather than some outside stimulant such as a ball team.

When the occasion arises I am in favor of the mill stepping out with a party or picnic or something of the sort, but such affairs should be spontaneous and only take place when the time is ripe, and they are certain to be successful.

JAMES WAYNE

The Problem of Training New Workers

Editor, Overseers' Round-Table:

I DO not believe that the training school is the last word in schooling efficient workers and I think that a great deal can be said for the old methods. In the first place the very name suggests the humdrum of school days and the new worker has an idea that here again is something which must be gotten through in the easiest way with the least amount of exertion.

If the worker is older than the group he, or she, has the feeling of being babied and that is certainly no way to approach the serious matter of learning a trade. Finally, the new worker is anxious to come to grips with something and is impatient of any theory at the moment. The theory might well come a little later.

Under the old methods the new operative at once becomes interested in the work, sees the actual production and feels that he, or she, is contributing something to that production. As far as picking up inefficient habits along with efficient ones is concerned, the overseer can easily guard against this.

KENNETH M. CHARLES

Editor, Overseers' Round-Table:

I HAVE had some experience with training schools and it is my opinion that they are a great help in solving the problem of inexperienced help. This is particularly true in regions where there are not a number of similar mills and the supply of experienced workers is limited. The greatest drawback of the old method lies in the fact that if certain inefficient practices have escaped the overseer's notice, these are passed along to the new arrival. Every old worker has certain tricks and these, in the light of doing a favor, are taught the beginner, when, as a matter of fact, most of these

Question of Smoking

"MR. CHASE," Jerry addressed the superintendent as soon as the overseers gathered, "just as you were walking across the mill yard a few minutes ago I was out on the shipping platform smoking a cigarette. I happened to be there and the trucker was smoking so I lit up too, despite all rules and regulations. You didn't happen to see me, but I know if you had you'd have looked a bit embarrassed and glanced the other way. The only reason I mention the incident is that it brought up the whole question of smoking which I think we might well discuss."

"You're quite right, Jerry," Chase replied. "I think it would do us good to talk openly about the problem. Have some of you other men anything to offer?"

"Well, I'll tell you," Bill spoke up, "this problem of smoking in the mill reminds me of prohibition. It's against the law to drink and it's against the rules to smoke in the mill, but everyone knows that a certain amount of drinking will be done and everyone knows that some smoking will always be done in the mill. Why make a fuss about either? You never get 100% observance of any law and I think that the best way to handle the smoking problem is just as we always have. See that there isn't an excessive amount of it going on, see that the rules aren't being flagrantly violated, but, at the same time, don't snoop too often in odd corners, and don't forget your own work just to be a crusader. As Jerry so honestly pointed out, we all fall once in a while, so don't expect too much from your fellow man."

"I sure don't want to be drawn into any discussion of prohibition," Pete laughed, "but just the same it does annoy me to wink at violations of a

in a Mill Comes Up

rule. Somehow it makes you feel a bit small and uncomfortable. There are good reasons why smoking should not be allowed in a mill, the most important one, I believe, being the fire hazard. I think the rule could be enforced absolutely with a little tact and diplomacy. On the other hand I wonder if the men's rooms could be fixed up some way so that smoking could be allowed there for very brief periods."

"Pete, you ought to know that would never work," Bill rejoined, "for they'd hang around there all the time and do nothing but smoke."

"I don't think they would if they were made to realize that you were trying to be fair with them, Bill."

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Can *you* make any suggestions for handling the problem of smoking in a mill?

Overseers and others are invited to discuss this and other questions brought up in the super's talks. Letters accepted and published will be paid for without regard to length. Brevity is desirable.

little personal ways of doing a job are inefficient and less practical than the routine method.

I believe that the rayon plants, being forced to train large numbers of workers, devoted considerable study to the training and it might be well for all of us to look into what they have done. HENRY CARVEL

Choosing an Assistant

Editor, Overseers' Round-Table:

THE QUESTION of picking an assistant is one which, I believe, does not receive the real consideration merited in many cases. Too often friendship causes prejudice and too often it is a case of picking the first name which comes up.

Summary of Discussion on Rest Periods

REST PERIODS for the workers did not receive a great deal of support in the contributions received and the view was generally held that, in the textile industry, the loss of production during the rest period could not be made up by added efficiency. One contribution claimed that few real tests had been made in the industry, and that, where the machinery was equipped with stop motions or was of such a type that it could continue to run during the rest period, the results might be far different from those expected. The plan has evidently not been tried extensively in the industry.

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To be frank there are also times when jealousy and fear of his job causes the overseer to pass over the logical man and choose the colorless, unimaginative plodder. I think that one of the important points brought out in the discussion is the fact that a good assistant places an overseer in the position where he can be moved to a better job without causing any disorganization, and it is surprising how often this question arises when the possibility of shifting men about is considered.

An overseer should select his assistant with the same care that the super exercised in selecting the overseer. The same principles apply and the greater the care the better the results.

CHARLES MARSHALL

The Question of Rest Periods

Editor, Overseers' Round-Table:

I AGREE with the contribution signed Jean Tripper in your June 31 issue that there may be something in this proposition of regular rest periods which it might pay us to look into, although at the moment I confess that I cannot see how it could be worked out properly in a textile mill. Some operations, such as transferring in hosiery work, where very close application is necessary, might offer possibilities for a test and then I should like to see it tried in some operation like spinning. I presume that the only real way to answer the problem would be to run an actual production test with and without rest periods. The facts would then answer the question and they are the best kind of an answer. Personally, where the machine would have to be shut down, I doubt the value of rest periods, but it might be worked out on winding machinery, braiders, automatic looms, etc.

J. C. LOWER

Editor, Overseers' Round-Table:

I WOULD not favor regular rest periods for the workers if it means going away from their machines. Certainly the present is not the time when machines may be left standing a few minutes several times a day or be left running bad work for lack of attention. On the other hand I would always allow an operative to sit down a few moments when possible and would provide facilities to do so—provided of course that the operatives always had their eyes on the work.

Where the mill has no rest room it is up to the overseer to provide the best he can where it is essential that girls or women have some rest, but I believe that to allow regular rest periods would cause disorganization, bad work and loss of production. "OVERSEER"

NEWS about MEN

DAVID JENNINGS has resigned as president of Aragon-Baldwin Cotton Mills, Chester, S. C., and in future will devote his entire time to J. P. Stevens & Co., New York. A successor to Mr. Jennings will be elected at a meeting of the board of directors to be held at an early date.

R. L. RAYBURN was recently elected president of the Morristown (Tenn.) Knitting Mills, Inc., manufacturers of infants' fine grade hosiery.

JULIAN TALIAFERRO, formerly president of the Leaksville Woolen Mills, of North Carolina, was made vice-president, and HERBERT E. PRITCHARD, secretary and treasurer of Springfield (Tenn.) Woolen Mills, Inc., at a meeting of the board of directors last week. No other changes were made.

C. F. JAMES, president of the Elizabeth James Mills, Marion, N. C., has been elected president of the Marion Lake Club.

JULIUS W. CONE, president of Revolution Cotton Mills, Greensboro, N. C., has been elected president of the North Carolina Traffic League.

HENRY MERRITT, former head of the Merritt Woolen Co., Webster, Mass., and RALPH K. HUBBARD, treasurer and manager of the Packard Mills, Inc., also of Webster, and family, are spending a vacation at York Beach, Me.

F. W. KAVANAUGH, formerly head of the Kavanaugh Knitting Co., Waterford, N. Y., has been selected as a delegate from Saratoga County to the Republican State Convention at Albany in September.

J. H. SHINE, president of the Hope Knitting Co., Cohoes, N. Y., represented that city at a meeting this week of Chamber of Commerce executives in the capitol district for the purpose of outlining community development plans.

WILLIAM COWLES GAITHER, executive of the Ridgeview Hosiery Mill Co., Newton, N. C., was married in Washington, D. C., recently to ALICE COMER, of Comer, Ga.

M. F. AUFSESSER, president of the Star Woolen Co., Cohoes, N. Y., has been named a member of the advisory board of the Albany County Republican Organization.

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FRANK H. WILLARD, president of the Graton & Knight Co., Worcester, Mass., and Mrs. Willard, will be at Planting Island, Marion, Mass., this summer.

J. E. SIRRINE, president of J. E. Sirrine & Co., Greenville (N. C.) textile engineering firm, is back from a trip through the Panama Canal and up the Pacific Coast.

WALTER S. WYMAN, GEORGE OTIS SPENCER, GEORGE E. SPOFFORD, EVERETT H. MAXEY, all of Augusta, Me.; WILLIAM B. SKELTON, Lewiston; ROBERT BRAUN,

Marshall Dilling elected president of the Arkwrights, Inc., for the coming year. He was also made executive secretary of the Southern Textile Association succeeding F. Gordon Cobb resigned

LEONARD A. PIERCE, both of Portland, have been elected on the new board of directors for the York Mfg. Co., Saco, Me., which has been acquired by the New England Industries, Inc.

GEORGE M. WALLACE, president of the Ohio Carpet Co., West Warren, Mass. and MRS. WALLACE, sailed on June 30 on the S.S. "Caledonia" for a summer European tour, planning to visit their old home in Scotland.

Following is the new committee of South Carolina Cotton Manufacturers' Association, known as the "cooperative committee," appointed by T. M. MARCHANT, of Greenville, S. C., president of the association: B. E. GEER, Greenville; W. C. HAMRICK, Gaffney; VICTOR M. MONTGOMERY, Spartanburg; JOHN A. LAW, Spartanburg; W. E. BEATTIE, Greenville; R. E. HENRY, Greenville; EMSLIE NICHOLSON, Union; GEORGE A. SLOAN, New York.

R. GRADY RANKIN, head of several textile mills in Gastonia, N. C., including the Pinkney Mills, Inc., Ridge Mills, Inc., and Hanover Mills, Inc., has been appointed by Gov. Max Gardner, of North Carolina, a member of the State board of conservation and development, succeeding B. B. GOSSETT, of Charlotte, president of the Chadwick-Hoskins group of mills, who has resigned, in order to devote all of his time to his large business interests.

Following officers of Arkwrights, Inc., an organization for textile research work established by southern mill men, to serve for the year have been announced as follows: MARSHALL DILLING, Gastonia, president; CARL R. HARRIS, Chester, vice-president, and WALTER C. TAYLOR, Charlotte, secretary and treasurer. Following is the directorate: F. G. COBB, Lancaster, S. C.; FRANK A. DENNIS, Ware Shoals, S. C.; R. W. PHILLIPS, Atlanta; CARL R. HARRIS, Chester; L. L. BROWN, Malvern, Ark.; J. O. CORN, Columbia; J. A. CHAPMAN, Inman; R. W. ARRINGTON, Greenville; H. K. HALLETT, Charlotte, and T. W. MULLIN, Rosemary N. C. The research committee consists of: MARSHALL DILLING, CARL R. HARRIS, R. W. ARRINGTON, H. K. HALLETT, J. O. CORN, WILLIAM B. HODGE and T. W. MULLIN.

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C. H. CARLOUGH, formerly connected with the Southern Asbestos Mfg. Co., Charlotte, N. C., is now vice-president and general manager of the Kubar Mfg. Co., of Davidson, N. C., manufacturers of asbestos textiles and paints.

J. WARREN VEDDER, vice-president and general manager of Rice, Barton & Fales, Inc., Worcester, Mass., and MRS. VEDDER, will spend the summer at Belvidere Plains, Falmouth, Mass.

P. J. WOOD, vice-president of the American Association of Textile Chemists and Colorists, will be the principal speaker at the summer meeting of the Piedmont Section, which will be held at the Myers Park Country Club, at Charlotte, July 12.

L. T. HORTON, formerly with the Cascade Mills, Inc., Mooresville, N. C., was recently appointed secretary and treasurer of the Mooresville Shirt Corp.

GEORGE W. NORWOOD, secretary and treasurer of the Thayer Woolen Co., North Oxford, Mass., and family, are passing the summer at Squirrel Island, Me.

W. M. MCLAURINE, secretary of the American Cotton Manufacturers Association, has returned to Charlotte, N. C., from a visit to mills in the eastern part of the State.

T. W. SWAN, formerly secretary of the Mohawk Carpet Mills, Amsterdam, N. Y., will return from an extensive trip through Germany early in September.

J. H. MCADEN, dealer in second-hand textile machinery and interested in many textile mills, has been elected president of the Merchants & Farmers National Bank, of Charlotte, N. C., succeeding W. C. WILKINSON, who died recently.

J. M. LAWLER, for seven years in charge of the New York sales headquarters of the McCallum Hosiery Co., has been appointed vice-president in charge of sales for the Oscar Nebel Co., Inc., Hatboro, Pa. Mr. Lawler will make his headquarters at the New York sales office of the Nebel company.

MURRAY HOBART has become associated with the Bauer & Black Division of the Kendall Co., Chicago, Ill., as purchasing agent. Since graduation from Northwestern University, College of Engineering, in 1914, Mr. Hobart has acquired wide experience in industrial organizations, having served in such capacities as purchasing agent, assistant vice-president and industrial engineer.

H. Y. MCNEIL, general manager of the Fonda (N. Y.) Glove Lining Co., and family, are spending the summer at their cottage at Lake Pleasant, N. Y.

BEIRNE GORDON, general manager of the Skenandoa Rayon Co., Utica, N. Y., was elected vice-president of the Industrial Advancement Corp. in that city at the annual meeting.

W. B. SANDERS recently was appointed manager of the Full-Knit Hosiery Mills, Inc., at Burlington, N. C., in the place of the late R. G. SELLERS.

HERBERT H. PEPLER, manager for Powdrell & Alexander, Inc., Danielson, Conn., and family, will pass the summer at Misquamicut, R. I.

JAMES M. DONNELLY, office manager and assistant agent for the Bigelow-Sanford Carpet Co., Inc., Clinton, Mass., has been promoted to agent, succeeding JOHN DAVIDSON, who held the position for the last 16 years and was also mill superintendent. Mr. Davidson, who retires on account of ill health, has been with the company for 36 years and will be retained in an advisory capacity. At the present time he is passing his vacation at Lake Winnepesaukee, N. H.

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F. KILBY HALL, of Milton, Mass., has been appointed a business specialist in the domestic division of the U. S. Dept. of Commerce. During the last two years he has served as a textile technologist in the U. S. Bureau of Standards, at Washington. Mr. Hall is a graduate of Lowell Textile Institute and also of George Washington University, Washington, D. C. Following graduation from Lowell Textile Institute he worked for a year in the Stirling Mills at Lowell. He was employed for two years in the technical department of National Association of Cotton Manufacturers, and then became cotton technologist of U. S. Dept. of Agriculture at Clemson College, Clemson, S. C. Mr. Hall is a member of the National Association of Cotton Manufacturers.

B. H. BRISTOW DRAPER, JR., son of the president of the Draper Corp., Hopedale, Mass., who is learning the textile business at Greenville, S. C., is passing a vacation at the home of his parents in Hopedale.

ROBERT EDWARD SMITH, JR., of Fairfax, Ala., was awarded the medal given annually by the National Association of Cotton Manufacturers to the member of the graduating class at the North Carolina State College with the highest rating.

RICHARD W. BISSONETTE, son of VICTOR J. BISSONETTE, president and general manager of the Standard Card Clothing Co., Stafford Springs, Conn., with which business he is also associated, has announced his engagement to MILDRED G. TAFT, Holyoke, Mass.

WILLIAM E. JONES, senior partner of the wool house of Hallowell, Jones & Donald, celebrated the 50th anniversary of his entrance into business recently, and received numerous floral remembrances, telegrams and telephone messages of congratulation in recognition of the event. When Mr. Jones entered the wool trade in 1880 he became a member of the staff of the firm of Hallowell & Coburn, then located at 139 Federal St., Boston. Later the firm moved to 556 Atlantic Avenue, and when the big migration to the Summer Street extension took place in 1899, located at its present address, 252 Summer Street. Mr. Jones had been made junior partner Jan. 1, 1895, and the present name of Hallowell, Jones & Donald was adopted when he became senior partner in 1906.

W. F. YOUNG, employment manager of the American Enka Corp., at Enka, N. C., has recently been appointed safety inspector for the corporation, succeeding H. E. JONES, assistant chief engineer.

FREDERICK A. MANCHESTER was recently appointed assistant to the general purchasing agent for the American Enka Corp., Enka, N. C.

JOHN A. BECHER, superintendent of designing and weaving at the Riverside division of the Riverside & Dan River Cotton Mills, Inc., Danville, Va., and family, sailed on July 5 for a vacation trip to Europe.

A. W. EDWARDS was recently made superintendent of the testing laboratory of the Morgan Cotton Mills, Inc., at Laurel Hill, N. C.

ALLEN SMITH, superintendent of the Millbury (Mass.) Spinning Co., Inc., and MRS. SMITH, have moved to Woonsocket, R. I., where they will make their home.

W. L. LONG, of Gastonia, N. C., was recently appointed by the American Combed Yarn Corp. superintendent of the Armstrong and Piedmont plants of the corporation. Mr. Long will remain superintendent of the Dunn plant of the company, it is said.

Sydney Munroe, manager of the Cost Section of The Cotton-Textile Institute, who spoke on the functions of cost systems at the annual meeting of the Southern Textile Association, Myrtle Beach, S. C.

C. O. SMITH, of Lancaster, S. C., is now superintendent of spinning at Middleburg Mill, Batesburg, S. C., succeeding W. T. MORTON.

N. L. WHITTEN, superintendent of the Thomaston (Ga.) Cotton Mills, after several weeks' treatment in an Atlanta hospital, is able to be back at his duties again.

C. P. WILSON, superintendent of the twisting department of the plant of the American Enka Corp., at Enka, N. C., has resigned.

HORACE J. BAUM, master mechanic for the Draper Corp., Hopedale, Mass., is at Fort Wright, N. Y., for two weeks in charge of an artillery regiment of which he is colonel.

R. C. H. WORCESTER was recently promoted from plant engineer to personnel director of the American Bemberg Corp. and the American Glanzstoff Corp., at Elizabethton, Tenn., succeeding E. T. WILSON, who has resigned.

FLOYD W. BRADLEY was recently promoted from night to day overseer of weaving at the plant of the Marion Mfg. Co., succeeding the late T. M. FLACK, who died recently.

HENRY F. HORN has accepted the position as overseer of weaving, beaming, cloth room and designing for the Franklin (Mass.) Weaving Co. Mr. Horn comes from New Bedford, Mass., and was formerly employed at the Hathaway Mfg. Co.

JOHN J. JOYCE, overseer of carding in Dedham Mills, East Dedham, Mass., has resigned in order to return to the Daniels Mfg. Co., East Brookfield, Mass. R. H. MANNING, until recently night overseer of carding in the Franklin (N. H.) Mills, has succeeded Mr. Joyce at East Dedham.

GUY PARIS, formerly overseer of carding for the New Hampshire Spinning Mills, Penacook, N. H., has been appointed overseer of carding at the Queen City Cotton Co., Burlington, Vt.

EDMUND A. MAYNARD, overseer of the preparing department of the Linen Thread Co. of Massachusetts, North Grafton, Mass., has been transferred to one of the plants of the Barbour Flax Spinning Co., Inc., Paterson, N. J., operated by the same interests. SAMUEL NOLAN and family of the North Grafton plant have also been transferred to the Dunbarton mill of the same company, Greenwich, N. Y.

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H. M. MILES has been made overseer of the spinning department at the Cherokee Spinning Co., Knoxville, Tenn.

JAMES B. MCKAY has resigned as overseer for the Sturbridge (Mass.) Finishing Co., to accept a similar position with the Apponaug (R. I.) Co.

R. V. OWENS, formerly second hand in one of the departments of the Stonecutter Mills Co., Spindale, N. C., now holds a similar position with the Patterson Mills, Rosemary, N. C.

WILLIAM L. FORAND, overseer of the silk department of the Slater Co., Inc., Webster, Mass., and MAE CURRAN, Willimantic, Conn., were married in the latter city on June 23.

NEWS about MILLS

Cotton

Adams-Swirles Cotton Mills, Macon, Ga., have been purchased from Jennings T. and George C. Adams by T. A. Shaw and Frank M. Swirles. The new owners, both of Chicago, are members of the Chicago firm of T. A. Shaw & Co., selling agents for mill products. Consideration in the deal was not disclosed, but the mill was constructed in 1919 by B. T. Adams at a cost of approximately $600,000. The mill was sold in 1924 to the late C. B. Willingham, who operated it until the time of his death last year. It was then acquired by Jennings Adams, George C. Adams and Frank Swirles, and the name changed from the Adams Duck Mills. The mill has been operating on full time, and will continue to do so under its new management, it is announced. It employs 175 operatives and runs 7,200 spindles and 175 looms.

Union Cotton Mfg. Co., Fall River, Mass., has scheduled a meeting of stockholders for July 23 to vote on dissolution of the corporation, liquidation of the business and disposal of assets. Since 1880 dividends amounting to $9,007,000 have been paid. Normally the mill employed 850 hands and operated 3,000 looms and 100,000 spindles. Last fall quick assets of the company were reported in excess of liabilities by about $35 a share. Authorized capital is $1,200,000 and the step is being considered because no profit has been realized in the last three years.

Thorndike Co., West Warren, Mass., closed its mills July 5. Employes in the cotton departments were released permanently. Those in the woolen department were informed that operations in that department might be resumed in two weeks.

Mt. Holly (N. J.) Textile Co. is planning rebuilding of portion of its mill recently destroyed by fire, with loss reported at approximately $90,000, including equipment, finished products, etc.

Clark Thread Co., East Newark, N. J., has reduced production by about 20%, effective immediately, releasing about 360 employes. Mill No. 3, consisting of two five-story units on Grant Ave., given over to spinning and twisting spindles, has been closed down until further notice.

Harden Mfg. Co., located at Worth, near Gastonia, N. C. Notice has been given by W. T. Love and S. A. Robinson, receivers, of sale of property, which consists of 85 acres of land, together with tenement houses, warehouses, mill buildings, textile machinery, equipment, etc. The textile equipment consists of 8,064 spindles and 4,000 twister spindles. The mill formerly made carded yarns, 20s and 30s.

A. M. Smyre Mfg. Co., Gastonia, N. C., is building a community house for its employes. The building and equipment will cost about $12,000.

*Indicates previous mention of project.

Tabardrey Mfg. Co., Haw River, N. C., of which corporation the Cone interests have a large part, is now turning out a line of corduroys, embracing the most popular weights and colorings. The new fabrics are finished at the Granite Finishing Works, at Haw River. According to Herman Cone, treasurer of the Proximity Mfg. Co., approximately 300 operatives are employed in the making of the corduroy, and both the weaving and finishing plants are running on full time.

Morgan Cotton Mills, Inc., at Laurel Hill and Marshville, N. C., manufacturing tire fabrics, have been on a full time schedule for the last two months.

Caraleigh Mills Co., Raleigh, N. C., will close shortly for an indefinite period, as announced by W. D. Briggs, president. The shut down will affect about 200 workers.

Great Falls Mfg. Co., of Rockingham, N. C., is adding to its varied line of fabrics a single filling duck and a twill.

Hannah Pickett Mills, of Rockingham, N. C., are installing 200 additional new looms, which will bring the total number in the company's two plants up to 2,700.

Statesville (N. C.) Cotton Mills started July 7, on a full time schedule. The mill has been running on a curtailed schedule since January but the last week enough business was secured to put the plant back on full time.

Falls Plush Co., Philadelphia, Pa., manufacturer of cotton plushes, Bowman & Cresson Sts., Manayunk, has been reorganized and additional capital will be supplied in the near future.

Warren (R. I.) Mfg. Co. closed June 27 for an indefinite period. Only 70 employes had been working the last week.

Blacksburg (S. C.) Spinning Mills, bankrupt, will on August 5 be sold at public auction, by Carl H. Hart, trustee, acting under orders of the Federal Court. No bid for less than $50,000 will be considered, and the successful bidder will be required to deposit with the trustee a certified check for $5,000 or its equivalent in cash. The property consists of a standard construction mill, two stories, 100x160 ft., with only the first floor occupied. The machinery equipment is 20 Saco-Lowell spinning frames of 240 spindles each and 25 40-in. Whitin cards, with all complementary machinery to manufacture 12s to 30s hosiery yarns. There are also 50 acres of land, 28 dwelling houses, one warehouse and nine garages.

Goodyear Tire & Rubber Co., Akron, Ohio, contemplates an addition to its new mill at St. Hyacinthe, Que., operated under the name of the **Goodyear Cotton Co. of Canada, Ltd.,** to furnish all cotton requirements of the parent organization. The present plant is supplying about 60% of company needs.

Wool

Bigelow-Sanford Carpet Co., Thompsonville, Conn., has received new orders requiring the recall of operatives on a vacation scheduled from June 28 until July 14. This week 200 looms are being operated at the Clinton, Mass., plant.

La Porte (Ind.) Woolen Mills, Inc., have been chartered under State laws to take over and operate the local mill and business of **Samuel Fox's Sons, Inc.,** who formerly operated as the **LaPorte Woolen Mills.** Norman J. Fox, secretary of the former company, will be president of the new organization.

Maine Spinning Co., Skowhegan, Me., has reorganized as follows: president, N. B. K. Brooks, Boston; vice-presidents, William Mitchell, Methuen, Mass., and Charles Jensen, Boston; treasurer, Ames Stevens, Lowell, Mass. The Ames Stevens Co. recently acquired the controlling interest in the company.

Adams (Mass.) Textile Mfg. Co., has been formed with a capital of $25,000, by Harry A. Sionsky, treasurer of the Adams Woolen Mfg. Co., with local mill, who will be president of the new organization, and William F. Lake, superintendent at the Adams Woolen Mfg. Co., who will be treasurer. It is understood that the new company will manufacture woolen goods.

American Woolen Co., Lawrence, Mass., resumed operations at its local Wood Worsted Mill on June 30, following several days suspension for inventory.

Alexander Smith & Sons Carpet Co., Yonkers, N. Y., resumed production on July 8, following a short shut down, dating from July 2, for inventory and to make a number of machinery improvements. The axminster division has resumed on a four-day week schedule.

Pendleton (Ore.) Woolen Mills have moved their headquarters to the four-story, 100x100 ft. brick building at 2nd and Jefferson Sts. The firm had outgrown its old quarters at 9th and Flanders Sts.

***S. B. & B. W. Fleisher, Inc.,** Philadelphia, Pa., formerly spinners of worsted yarns, failed to live up to the terms of $2,000,000 first mortgage agreement, as admitted in answers filed in U. S. District Court. Receivers are now making a survey of the machinery and real estate holdings prior to liquidation of claims of mortgage bond holders. John Fisler and Arthur Fleisher were appointed receivers and court appointed Edward Jefferson appraiser of machinery and Edgar Cross of the real estate.

French Worsted Co., Woonsocket, R. I., has obtained a permit for additions and alterations to its plant on Hamlet Ave., costing more than $16,000.

Guerin Mills, Inc., Woonsocket, R. I., are running on a capacity basis, with full working forces in all divisions, and expect to hold to this schedule for an indefinite period. An overtime night working force is being employed.

Knit

Harris Silk Hosiery Co., Springfield, Mass., closed its mill June 28 and will reopen July 21.

Julius Kayser & Co., Brooklyn, N. Y., continue production on a capacity schedule at their mills, and report June sales as 14% in excess of the same month a year ago.

Sterling Mills, Ilion, N. Y., sweaters and sweater coats, are now operating near capacity with many new hands.

J. L. Teller Co., Inc., New Hartford, N. Y., rayon underwear, has taken on 75 new hands since Jan. 1, in carrying out expansion plans.

Larkwood Hosiery Co., Charlotte, N. C., is continually adding equipment, as business justifies, to reach the capacity of the new building. At present 12 full-fashioned hosiery machines are in operation.

J. W. Landenberger & Co., Philadelphia, Pa., manufacturers of hosiery have broken ground for their new mill building which will be located at Castor St., & Kensington Ave. It will contain approximately 50,000 sq.ft. of floor space, giving them facilities for more than doubling when additional space is required. It will be concrete throughout with hardwood floors and will embody the most advanced features in manufacturing.

Northwood Hosiery Co., Philadelphia, Pa., manufacturer of full-fashioned hosiery, has acquired a branch plant at Greensboro, S. C., located at Howard & Hiatt Sts., where it will install full-fashioned machines. For the present at least the southern plant will be the branch plant. It is possible the company will move from Philadelphia, but it is reported operations will continue in both plants for the present.

Cadet Hosiery Co., Inc., Columbia, Tenn., is installing 25 additional full-fashioned hosiery machines which will soon begin operating.

United Hosiery Mills Corp., Chattanooga, Tenn.—A plan of recapitalization was adopted at a meeting of the directors of the United Hosiery Mills Corp. held June 30.

Silk

Cheney Bros., South Manchester, Conn., silk manufacturers, have announced an indefinite shut down of the dressing mill, affecting 283 workers. A falling off in demand for spun silk yarns is the cause.

Carpenter Mfg. Co., Norwich, Conn., has acquired the Schwartzenbach-Huber Co.'s silk mill. The silk machinery is to be moved. The Carpenter company manufactures shades, picture cord, tinsel cords and clothes lines.

Rossie Velvet Co., Willimantic, Conn., reports improved business with half the working force on a 48-hour schedule. It is expected the other half will resume full schedules within a month.

Mabson Corp., Holyoke, Mass., recently formed with a capital of $25,000, will take over and operate local mill of company of the same name, given over to silk throwing. The new organization is headed by Harry A. Bornstein, president, and Emanuel B. Bornstein, vice-president. Joseph M. Bornstein, Paterson, N. J., will be treasurer of the new corporation.

Clyde, N. Y. T. R. Jewett, vice-president of the Jewett Silk Corp., operating silk manufacturing plants at Clyde and Lyons, N. Y., has acquired a mill building in Glasgow St. Remodeling is under way, new machinery and equipment will be installed and the new silk plant will be operated independent of the Jewett Silk Corp.

Watertown (N. Y.) Silk Mfg. Co. has filed dissolution articles, according to a certificate filed under State laws.

Water Gap Throwing Co., East Stroudsburg, Pa., has been organized to produce grenadine and crepe twist yarns, with the possibility of making rayon crepe yarns. The company has taken over the throwing mill formerly occupied by the **Amalgamated Silk Corp.** and will operate approximately 49,000 spindles.

Finishing

Alco Piece Dye Works, Inc., Paterson, N. J., have been ordered by the Court of Chancery, to show cause on July 14, why a receiver should not be appointed for the company; this follows a recent petition of creditors of the concern.

***Associated Dyeing & Printing Corp.,** Paterson, N. J. John Milton, Jersey City, N. J., and James A. Wiley, Paterson, have been appointed equity receivers for this company under a joint bond of $50,000. The receivership is said to be a step toward the reorganization of the company, planned several months ago. Assets are listed at $6,000,000, and liabilities not stated.

Miscellaneous

Capitol Mattress Co., Worcester, Mass., recently formed with a capital of 300 shares of stock, to operate a local mill, will be represented by Samuel Skeist, 72 Paine St., Worcester, treasurer. It is understood that Mr. Skeist will also act as president.

Miles Linen Co., Inc., Salem, Ore., has started construction of a 30x40 ft. fireproof addition to its mill, which is the first move in an expansion program.

American Line Co., Pawtucket, R. I., has completed installation of 600 braiding machines in a leased plant at Utica, N. Y., where about 75 hands will be given steady work on Aug. 1.

Goose Creek, Tex. O. E. Allen, Goose Creek, and associates are organizing a local company to establish and operate a mattress mill, initial plant reported to cost about $20,000.

Maley-Miller Mfg. Co., Milwaukee, Wis., wool comforters, batting and wadding, has filed schedules in bankruptcy, showing liabilities of $8,431, and assets of $5,241.

*Indicates previous mention of project.

Textile Patents

CIRCUAR - knitting machine. 1,768,644. Harry Swinglehurst, East Orange, N. J. Assigned to Scott & Williams Inc., N. Y.

CIRCULAR - knitting machine. 1,769,580. Harold E. Houseman, Wilmington, Del. Assigned to Standard-Trump Bros. Machine Co., Wilmington, Del.

CIRCULAR-knitting machine. 1,769,662. Percival Arthur Bently, Charles Frederick Manger, and Carlyle Herbert Wainwright, Leicester, England; said Manger and said Wainwright assignors to said Bently.

CIRCULAR-knitting machines. Yarn-changing mechanism for. 1,769,579. Harold E. Houseman, Wilmington, Del. Assigned to Standard-Trump Bros., Machine Co., Wilmington, Del.

CLOTH and its manufacture. 1,769,055. Walter M. Fuller, Chicago, Ill.

COTTON cleaning apparatus. 1,768,837. Peter Paul Haring, Dallas, Tex.

COTTON gins, Brush for. 1,769,869. William C. Torbett, Waco, Tex.

COTTON preparing machine. 1,769,669. Elmer T. Wuest, Cincinnati, Ohio.

COTTON stripper. 1,769,104. Bert R. Benjamin, Oak Park, Ill. Assigned to International Harvester Co.

CUTTING textile materials, Apparatus for. 1,768,736. William Berry, Wilmington, Del. Assigned to Joseph Bancroft & Sons Co., Wilmington, Del.

GASSING machine. 1,768,662. Charles E. Buckley, New Bedford, Mass.

LOOMS, Compensating device for. 1,768,934. Carl Schaum, Philadelphia, Pa. Assigned to Fletcher Works Inc., Philadelphia, Pa.

LOOMS, Design weaving attachment for. 1,769,052. Robert G. Clark, Brooklyn, N. Y.

LOOMS, Protector mechanism for. 1,769,402. Kenneth J. Unwin, Worcester, Mass. Assigned to Crompton & Knowles Loom Works, Worcester, Mass.

LOOM-tape selvage-motion hanger and bearing. 1,769,460. Reginald P. Rearden, Warrenville, S. C.

NARROW-ware looms, Chain guard for. 1,766,903. Elbridge R. Holmes, Worcester, Mass. Assigned to Crompton & Knowles Loom Works, Worcester, Mass.

NEEDLE. 1,769,319. William Stricker, Kansas City, Mo.

NITRATED fabric and method of making the same. 1,769,702. Aaron London, and Joseph Datlow, Brooklyn, N. Y.

PICK and pick looms, Weft-replenishing mechanism for. 1,766,831. Samuel A. Nelson, Worcester, Mass. Assigned to Crompton & Knowles Loom Works, Worcester, Mass.

PROCESS in which cellulose-acetate artificial silk and like products are treated with hot liquors. 1,765,581. Archibald John Hall, Timbersbrook, Congleton, England. Assigned to Celanese Corp. of America.

PROCESS of forming spinnable slivers from artificial filaments and apparatus therefore. 1,768,221. Meinard F. Thoma, Fitchburg, Mass.

PROCESS of producing patterns on plated knitting and the corresponding product. 1,768,125. Joseph Mahler, Nemecky Brod, Czechoslovakia. Assigned to Fidelity Machine Co., Philadelphia, Pa.

RING-spinning frame. 1,767,888. Georg Jacob, Gautzsch, near Leipzig, Germany. Assigned one-half to the Firm Kammgarnspinnerie Gautzsch Bei Leipzig Aktiengesellschaft, Gautzsch, near Leipzig, Germany.

ROVING frames, Driving mechanism for bobbin shafts of. 1,766,586. Frederic E. Banfield, Jr., and George F. Albrecht, Saco, Me. Assigned to Saco-Lowell Shops, Boston, Mass.

RUNS in hosiery, Machine for repairing. 1,769,860. Bernard A. Schmitt, Brooklyn, N. Y. Assigned to Gotham Knitbac Corp.

SHUTTLE check. 1,766,757. William E. Lundgren, Worcester, Mass. Assigned to Crompton & Knowles Loom Works, Worcester, Mass.

SHUTTLE tension and take-up mechanism. 1,766,904. Allan S. Hutchins, Worcester, Mass. Assigned to Crompton & Knowles Loom Works, Worcester, Mass.

SPLICED knit fabric and method of making the same. 1,769,856. Albert E. Page, Brooklyn, N. Y. Assigned to Scott & Williams, Inc., N. Y.

WARPING carriages, Tension indicator and compensator for. 1,769,244. William Geo. Trautvetter, Paterson, N. J.

WATERPROOF fabric and method of making the same. 1,769,611. Harold Warp, Chicago, Ill.

YARNS for weaving, Apparatus to prepare. 1,768,746. George B. Cocker, Gastonia, N. C. Assigned to Cocker Machine & Foundry Co., Gastonia, N. C.

Questions and Answers

We undertake to answer, free of charge, to the best of our ability, questions pertaining to textile matters received from any regular subscriber to TEXTILE WORLD. We do not undertake, however, routine analysis of yarn or fabric, or investigation involving unusual expense.

Inquiries should give the fullest information and data possible. In the case of damage to material, a sample should be sent. All inquiries must be accompanied by the name of the person inquiring, not for publication, but as evidence of good faith. The identity of those seeking information on technical subjects will not be disclosed.

Letters expressing opinions or voicing criticism are cordially invited. These will be signed by the correspondent's name unless the letter itself contains a request that the name be withheld.—EDITOR.

Cut Ends in Cotton Twisting

Technical Editor:

I am enclosing samples of the yarn which is received by my twisting department. I would like you to examine them and see whether you can find any faults. This yarn is used for making thread and is twisted through a very small die or brass tube. I have had a lot of trouble with cut ends. I have had difficulty in convincing the mill that the fault is in the yarn. They claim the fault is in my machines. (7256)

A careful inspection first shows that the yarn is full of thick and thin places. From all appearances, it is combed yarn. It sizes approximately 12s, but in reality it may be between 8s and 10s and, due to the handling through the mails, is sizing light. The cotton pulled from this yarn appears to be 1¼-in. staple.

Due to the fact that the samples were in very short lengths, the amount of yarn that could be strained by the hands was limited to about 8 to 10 in. It appears from this analysis that considerable twist is contained in the yarn and that it is in many instances traveling to the thin spots, making such places brittle and probably causing the yarn to break as though it were cut. None of the samples received was actually cut at any points between the two extreme ends by machine processing. In several instances it appears as though the last roving frame or, more probably, the spinning frame is not drafting out the stock properly—a condition due probably to wrong roll settings, sprung metallic rolls, dry top rolls, wrong roll weighting and leverage, or possibly wrong speeds. If the spinning spindles in your mill are band driven, the bands may be too slack, the spindle whorls worn, or the speed too high.

It would prove of considerable value for you to take ten or twenty full bobbins of yarn as received at your department, make several skeins of 120 yd. of all the yarn on each one and then size each skein separately. This would show the variation in size or weight. These skeins should then be broken to show the variation in strength; this would also show the evenness of break.

Possibly a twist counter would prove of considerable benefit to you if you have not standardized on the twist in the yarn received. In many cases it is taken for granted by the buyer that the twist is correct when in reality, due to machine conditions, the yarn contains more. It seldom contains less, unless the mill is pushed for production.

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Fancy Jersey Cloth

Technical Editor:

Please find enclosed a small piece of cloth. I would like to know how it is made and if it can be made on a circular machine. (7224)

This piece of fancy jersey was made by knitting plain for eight courses and then transferring the loops from every other needle, one needle to the right or left. This leaves every other needle empty. On the ninth course, the first of a second repeat of eight plain courses, the empty needles pick up loops but the small holes result. On the second repeat the needle loop is transferred similarly, but from the other needles.

This may be very readily made on the old-fashioned hand frame. It can be made on a machine of the Cotton-patent type, such as is used for full-fashioned underwear and hosiery. We believe also that it can be made on a circular machine by means of points placed in the sinker wheel or by means of special cut wheels. For the latter method an eight-feed machine is required, with one special feed. This is equipped with a special wheel which bends one needle in front of another and transfers its loop to the second needle just before the knitting cycle starts.

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Grading Viscose Rayon

Technical Editor:

Will you advise us in what respects second-grade viscose varies from first-grade viscose?

We would like to know particularly what the trade considers as first-grade yarn on cones; i.e., the number of knots allowable per cone of approximately 1½ lb. of 150-denier yarn. The writer has heard it argued that to be classed as first-grade a cone must not contain over six knots. This appears to him to be an impossibility, as the majority of the companies are running approximately 3,000-yd. skeins. This requires approximately 15 skeins to make up 1½ lb. of finished yarn, and, unless the large 7,500-yd. skeins were used, would necessitate at least 14 knots per cone. (7170)

There are no accepted or agreed-upon standards in the trade distinguishing these two grades of fiber. Second-grade viscose contains more broken filaments throughout the skein than does first-grade, and may also have some broken threads which have been tied to the lacing threads. There will be no difference found in the color, softness, or general characteristics between a first- and second-grade skein. It is simply the mechanical defects, such as the presence of broken filaments, which determine the grading of rayon.

In reference to the question of the number of knots allowable in a first-grade cone of approximately 1½ lb. of 150-denier yarn, we can say that in general the number of knots will depend upon the number of skeins which go to make up a cone, and obviously on the length of the skeins. In view of the fact that there is no standardization as to length of 150-denier skeins, it is rather difficult to state just what total number of knots would be

found in cones put out by various rayon manufacturers.

You are aware of the fact that some companies make a 3,000-yd. skein, while others make a 7,500-yd., 150-denier skein. If the cone were composed of 3,000-yd. skeins, there would be about 15 knots in the cone from simply tying in each individual skein which went into the cone, and in addition to this there might be other knots resulting from some minor breakage during the winding operation. In general, you will probably find that first-grade cones contain anywhere from 10 to 20 knots, depending entirely upon the skein length of yarn used in producing the cone package.

It must be kept in mind that a first-grade cone is not determined on the basis of the total number of knots showing on the head of the cone, but upon the quality of the yarn which goes into this cone. In order to produce a first-grade cone we must have skeins free from broken filaments and other defects. Likewise, the color of the finished cone must be uniform, and the compactness and uniformity of the package must be of a proper character.

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Tight Edges on Georgette

Technical Editor:

We are having considerable trouble with tight edges on georgette. Will you kindly give us any information you can that will enable us to correct this? The ground is 38/2, three-thread, 13/15; while the edge is made with two-thread, 13/15 organzine, reeded three double in a dent. In warping we reed the edge four single and have tried eight single in a 38. The result was rolled edges on the warp. (7232)

There are several factors having a bearing upon the question of tight edges in georgettes concerning which you do not afford information. You do not say whether the rolling of the edges occurs in the unfinished goods, or in the finished goods; you do not give the picks per inch, or the size of the filling thread; and you do not tell whether the rolling occurs on one edge, or on both edges. There is also the question of whether temples are used on the loom or not.

In connection with this trouble, however, attention may be drawn to a number of elements. These include the proportionate amount of the filling in the cloth, as compared with the warp; the strength of the pick—that is, the amount of drag on it; the question of the closeness, or openness of the spacing of the warp ends in the selvage, though it may be remarked that the reeding of three double ends in a dent is quite common.

If the trouble occurs on one of the selvages and not on the other, it may be due to unequal tension of the two. While this would ordinarily be caused in the warping, the tension under which the organzine threads have been wound on the bobbins, as compared with the tension of the crepe twist threads, will have some bearing upon this.

Another cause of variation in tension is the way in which the thicker edges of the cloth, where the selvages are, will build up on the cloth roller. The harnesses may not be properly set. If the shed is too small, when the shuttle passes through, it will have a tendency to twist the outside selvage threads. Or, if the picker is a little too low, it may give the shuttle an upward throw and thus twist the threads, even if the shed is all right. If there is too heavy a drag on the filling thread, the undue contraction which will take place in the selvage warp threads may cause trouble. Owing to the building up of the heavier organzine threads on the warp beam, the let-off may be affected.

You might try a weave for the edges with two picks in the shed instead of one; this would lessen the take-up and ease off the strain, but of course would require the use of two additional harnesses. You might also try the plan of having the selvage threads wound on anchor bobbins, which, with their bearings, etc., would be suitably placed underneath the loom near the back. The threads from this would then be carried over the spreader roller and joined in at the sides with the rest of the warp. This would permit easing up of the tension on these selvage threads to any extent desired.

We believe that by experimenting along the lines suggested you will be able to find a remedy for the trouble.

JAMES CHITTICK

THOUSANDS of inquiries are handled annually by the Technical Editors. In order that as many readers as possible may benefit from this service, we select problems of general interest for publication each week.

◆

Twist in Knitted Tubing

Technical Editor:

We are enclosing two small lengths of tubing which have a different appearance, although they were knitted on the same machine from the same quality of wool and the same number of twists in the ply. The navy is satisfactory, but the brown contains too much twist to work out evenly after steaming.

Will you kindly examine these two lengths and let us hear from you as to what you think causes the excess twist in the brown? (7233)

We examined these two samples, and since we could see no indication of any machine trouble, we examined the yarns. The length of stitch did not seem enough different to cause any trouble.

An examination of the ply twist of the two yarns seems to indicate that the average ply twist is about the same in both yarns. However, as the tests of 10-in. lengths were recorded, the blue yarn showed very much less variation than the brown yarn. The accompanying table shows the twists in 10-in. lengths.

Twists in 10 In.		
Blue	Brown	
78	68	66
78	75	77
77	78	82
74	81	76
78	80	81
78	77	67
73	77	87
79	72	71
78	77	76
76	68	76
Average 76.9	75.3	75.9
Variation 7.8%	17.3%	27.7%

As these tests were taken very close together, each test represents about 12 in. of yarn. The conclusion is that

the varying twist was high enough in some cases to give the twist to the tube.

In order to show the variations in twist more completely, the following tests were made on 1-in. lengths with about 1 in. between each test:

Ply Twists per Inch

Blue		Brown	
8	8	7	8
6	10	7	11
8	12	10	8
6	7	10	6
12	7	11	5
10	9	8	8
6	8	10	9
5	6	9	11
6	6	5	11
7	8	6	8

It appears that the average twist from these tests will not be quite so accurate as that found in the first table, due to inaccuracies in working with 1-in. lengths. However, these may show the trend of the twist in short lengths.

Taken on the whole (twenty counts) the blue yarns are more uniform, although this table shows two lengths with high twist. Note, however, the group of six counts for the brown ranging from 8 to 11 and the last five all in the same range.

It is our opinion that the twist in the tube is due to the twist in the brown yarn being different from that in the blue yarn. This trouble may result from unevenness in the single yarns.

◆

Singeing Woven Elastic Fabric

Technical Editor:

We are enclosing herewith a sample of woven elastic in which we have used a 24/2 combed peeler yarn. This elastic was sized after it was woven. You will notice it is more or less fuzzy, and we would like to know whether there is any method whereby this condition can be overcome.

Another question we would like to ask is: What makes the elastic curve? We find that more or less of the elastic we make curves, and that some of our competitors' does the same. We have done a great deal of experimenting in trying to overcome this trouble, but so far have not been successful. Any information you can give us that will enable us to overcome these troubles will be greatly appreciated. (7225)

The fuzzy condition mentioned is quite natural with ungassed yarns. The method used by most manufacturers to remove the fuzz is to pass the woven material through a flame of either alcohol or illuminating gas (there seems to be little choice between the two), thereby singeing off the stray or loose fibers. In some cases the gassing is made a separate operation; in others the gas burners are made an integral part of the calender or finishing machine. As a demonstration of the results obtained by singeing we have run one end of the sample through an ordinary gas flame.

Elastic webbing curves because of the uneven tension under which the rubber threads enter the fabric. Even with the best workmanship, in making rubber warps there is bound to be some variation in the tension of the different threads, due to the slight variation in width or thickness of the rubber.

However, you will find that the difference in tension may be reduced to a minimum if, in making the warps, the rubber is drawn from a great distance, 60 to 100 ft., and wound on the beams fairly tight. The whole secret is in the even tension of the rubber. Any curve then found in the fabric may be removed in the finishing if the webbing is run through the proper size bath under the proper tension.

Proof of the unevenness of the rubber tension may be found by measuring off a 2-in. piece of elastic webbing, extracting the rubber threads therefrom, and measuring them. In the sample submitted with the inquiry, the variation was quite marked.

◆

Tiger Stripes on Mercerized Fabric

Technical Editor:

Please note enclosed sample of dyed mercerized cotton goods. We shall appreciate your advising us as to the cause of the streaks which are very evident in the dyed fabric. (7207)

An examination of the sample submitted indicates that the streaky dyeing is caused by uneven mercerizing of the yarn. The streaks occur in courses at irregular intervals, sometimes showing only part of the way around the fabric and sometimes in a stretch of several courses together.

Wherever they occur, the dyeing appears to be much lighter than in the rest of the knitting. This uneven dyeing causes what are called tiger stripes. These streaks cannot be avoided altogether when the mercerization is not what it should be, but they can be minimized to a large extent by a judicious and carefully controlled dyeing. On the other hand, they can be emphasized by not paying attention to details.

In dyeing mercerized cotton goods, as well as yarn, dyestuffs must be selected that have, as far as possible, the same degree of exhaustion at the same or near the same temperature. For best results those dyes that exhaust the slowest are to be preferred. In selecting dyestuffs for a given shade on mercerized goods, contrasting colors should be avoided. For instance, in dyeing a gray shade, if a green, a red, and an orange or yellow are combined, it is a sure way of courting disaster. The proper way is to get a gray dyestuff that is near the shade wanted, and if necessary, tone that down with a little brown or yellow, with as little shading as possible. With the number of good dyestuffs now at the disposal of the dyer, it is not difficult to select a good dye to use as a bottom for any shade. To match the pattern, as few dyes as possible should be used.

It is important that the goods should be well prepared before dyeing is attempted. They should be properly wet out in the dyebath before any dyestuffs are entered. To promote an even absorption through the goods, a good penetrating agent, together with a small percentage of turkey-red oil, should be added to the dyebath. No alkali of any kind should be used in dyeing mercerized cotton goods. An alkaline bath will accelerate the absorption of the dye and should be avoided. The goods should be boiled in the dyebath at least 30 min. before adding glauber salt if needed; in dyeing light shades the salt should be omitted.

If you follow these few simple rules, we believe you will find that in spite of the poorly mercerized cotton, the dyeings will be greatly improved.

New Machinery and Processes

Yardage Test for Thrown Silk

A NEW test for determining the yards per pound of thrown silk, known as the yardage test, has been developed by the United States Testing Co., 316 Hudson St., New York. The new yardage test is entirely different from the regular sizing test made on raw silk and rayon. Instead of winding the thrown silk on reels, where there is a question of ballooning and varying tension, thousands of yards are run over an aluminum wheel mounted on ball bearings and equipped with a direct-reading Veeder counter. Particular care had to be exercised in manufacturing this direct-reading equipment to insure a uniform circumference of all the measuring wheels, to prevent the yarn from slipping or climbing the side walls of the wheel groove, and to prevent inaccuracy due to the breaking or running out of the thread. It is stated that all these factors were eliminated, the latter by providing the wheel with a positive stop motion.

About 3 lb. of thrown silk are measured in determining the yards per pound by this new method. This means that on a 13/15-denier, three-thread crepe, approximately 150 miles are measured, thus assuring a representative sample. Another feature is that the entire sample tested is returned, without loss, to the customer.

The report shows the actual yards per pound based on the net weight of the yarn as received and also the yards per pound corrected to the official fiber weight. This combination fiber-and-yardage test on thrown silk and rayon, with the yards per pound based on fiber test weights, is the procedure recommended by the United States Testing Co. These new yardage units are also applicable for the measuring of cotton, wool, and other yarns on cops, cones, or in skein form.

ORIGINAL NO.

United States Testing Co., Inc.
OFFICIAL TESTING HOUSE FOR
The Silk Association of America

TELEPHONE SHERWOOD 3237
PATERSON TESTING HOUSE
220 ELLISON STREET, PATERSON, N. J.

REPORT OF YARDAGE TEST

PATERSON, N. J. April 28, 1930

John Doe

MARK AND NUMBER 19

TEST MADE ON 3 thread Japan Crepe

SAMPLED Officially.

NET WEIGHT OF SILK MEASURED	3.28 LBS.	1.49	KILOS
TOTAL YARDS MEASURED	277,081 YDS.		
YARDS PER POUND			
"AS RECEIVED"	84,309		YDS.
*BASED ON FIBER TEST NO. L-445	87,790		YDS.

SIGNED FOR THE COMPANY George Sidman

*Calculated to conditioned weight and 25% boil-off.

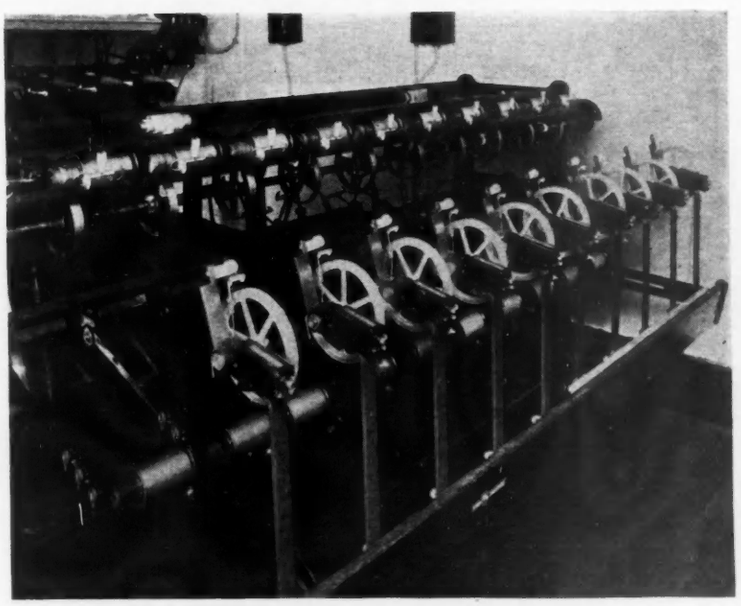
Form of report used with new yardage test for thrown silk

Push-Button Control for Variable Speed Reducers

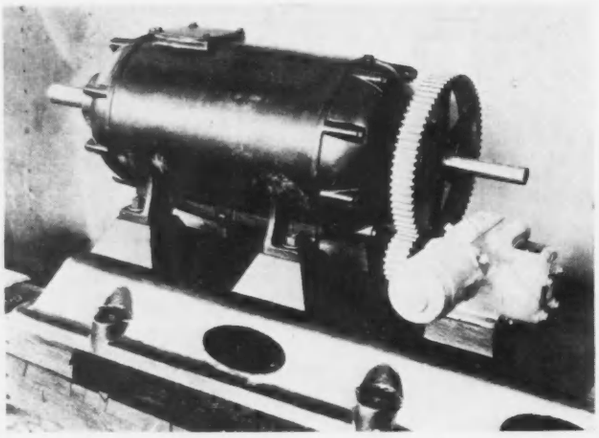
ELECTRICAL push-button control for "JFS" variable speed reducers is announced by Stephens-Adamson Mfg. Co., Aurora, Ill. This device makes it possible for operators to increase or decrease the speeds of textile machinery by merely pushing a "fast" or "slow" button until the desired speed has been reached.

The "JFS" transmission is an enclosed unit, ordinarily driven by a constant-speed electric motor and capable of delivering the power at reduced speeds, which can be changed to suit the varying conditions so often encountered in textile mills. Ordinarily the speed is regulated by means of a handwheel on the transmission. When the drive is accessible, this method is satisfactory; but when the drive is overhead or located in a crowded corner, hand control becomes difficult.

In several recent installations the problem was solved by using an electrical control on the "JFS" transmission. The usual hand-control wheel was replaced by a spur gear driven forward or backward by means of a compact C-H control motor mounted on the base. The push-button box is located at any distance from the drive, and the speed is increased or decreased by simply pressing the proper button. As long as one button is



Bank of yardage-test units attached to winding frame



Variable speed reducer equipped with electrical remote control for varying speed by means of push buttons

pressed, the speed changer continues to either increase or decrease its output speed. When the desired speed is reached, the button is released and the rotation remains constant until a new speed is wanted.

Approximately one minute is required to change speed from one extreme to the other. For example, the output speed of a speed reducer driven by a 1,200-r.p.m. motor can be changed from 24 to 144 r.p.m. in slightly less than a minute. In case the control is located out of sight of the machine, a tachometer can be used as a quick and accurate way for indicating the number of revolutions, feet, or units being produced per minute.

Delusterizing Silk Hosiery

LUSTERLOS, a compound for producing a dull finish on silk, rayon and cotton, has been announced by E. F. Houghton & Co., Philadelphia, Pa. The new product is expected to prove of especial interest and value to hosiery manufacturers who have on hand an accumulation of high-luster hosiery which they wish to delustre. It is said that the degree of delustering is readily controlled by varying the amount of Lusterlos used and the length of time of application.

Hosiery being dyed for the first time is delustered by adding the compound to the last rinse bath, while fabrics already dyed are simply wet out and treated in a solution of Lusterlos. Since the product is applied at low temperature (60 to 100° F.), the shade of the dyed hosiery is not altered appreciably. The manufacturers state that the strength of hosiery treated in this manner is not impaired and that the delustering effect remains on the goods after several washings. To eliminate the danger of skin infection from using delustered hosiery, antiseptic substances have been incorporated in the product by the manufacturer.

Tachometer

INDUSTRIAL tachometers, for use in textile mills and other plants where constant knowledge of exact machine speed is required, have been placed on the market recently by the Jones-Motrola Sales Co., 370 Gerard Ave., New York. With this device speed may be indicated in revolutions per minute, feet per minute, yards per minute, etc. It is stated that use of the tachometer

Industrial tachometer

aids in keeping production speeds up to any predetermined rate, and thus enables more efficient operation of machines.

In textile finishing, for example, the predetermined optimum speed of a tenter frame, which is running a light grade of cotton goods, may be 35 yd. per min. If, through fear of damaging the goods or for some other cause, the operator—having no way of determining machine speed—runs the machine at a rate of speed lower than this, production is not maintained at normal, and costs, therefore, are increased. On the other hand, with a tachometer there is provided a constant and visible means of knowing how fast the machine is functioning; the operator has no excuse for running it at less than the normal rate; and efficient operation is thereby encouraged.

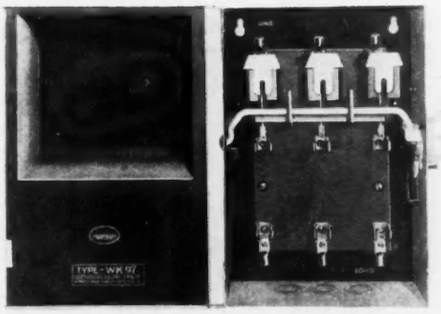
Safety Switches

QUICK-MAKE and quick-break safety switches conforming with the underwriters' new test procedure are announced by Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa. In the design of these Type WK-97 switches a high degree of compactness has been achieved without the sacrifice of ample wiring room or sufficient voltage spacings.

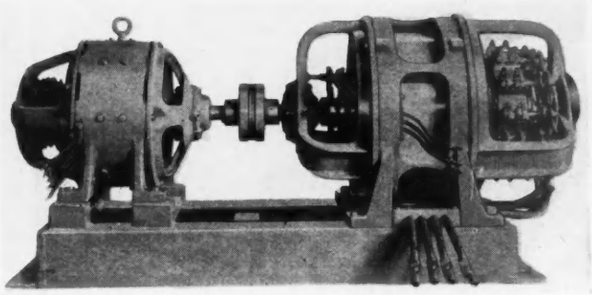
A "De-ion" arc quencher on the 575-volt size and other advanced features of design are incorporated in this line of switches. The arc quenchers are mounted individually over each jaw and are also easily removed from the front if it is desired to remove them for wiring. All copper parts of the switch are removable from the front of the base. Jaws and connecters are of the one-piece formed type, thus decreasing the number of clamped contacts and eliminating any possibility of heating from this source.

Diamond-pointed break jaws and extended blades assure clean contacts and prevent burning and beading of normal current-carrying contact surfaces in the working parts of the switches.

The operating mechanism is actuated by a compres-



Safety switches



Frequency converters

sion spring which assumes a positive quick-make and quick-break. Possibility of the spring breaking is very remote, due to the large factor of safety used in its design. In case of a broken spring, external operation of the switch is possible, and the broken spring will not come in contact with current-carrying parts. The crank and all unpainted steel parts are cadmium plated to prevent oxidation. Other features include dustproof crank bearings with grease packing, knockouts pressed back into the box to decrease the filtration of dirt and excessive moisture into the box, bases of Monson slate, and lock-on and lock-off brackets.

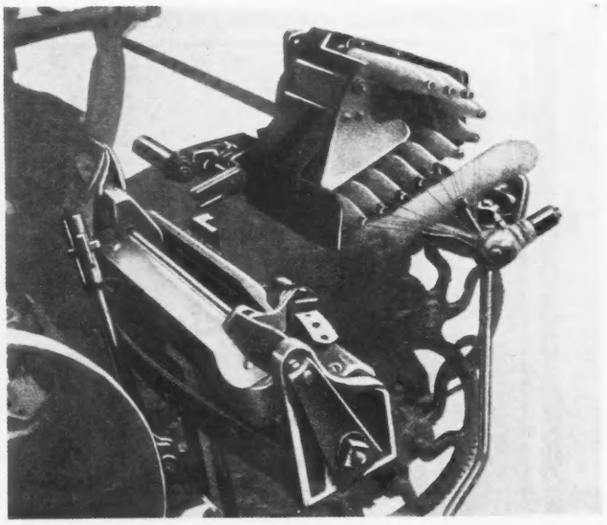
Frequency Converters

FREQUENCY converters designed to obtain frequencies different from those furnished by the power companies have been placed on the market recently by the Reliance Electric & Engineering Co., Cleveland, Ohio. These machines are built for operation in either two -or three-phase current. These frequency converters are said to provide an economical method of obtaining single-phase, two-phase or three-phase current at any low frequency. It is stated that they are especially economical for obtaining very low frequencies, such as three to fifteen cycles.

The frequency converters have been used to obtain variations in speeds with squirrel-cage induction motors and to get speeds which are either higher or lower than can be obtained from induction motors operating on a standard frequency.

Filling-Replenishing Attachment

FOR converting ordinary looms to automatic looms a filling-replenishing attachment has been introduced to the American textile industry by H. Edward Jefferson, 620 South Delaware Ave., Philadelphia. This device, which was developed by Whittaker Automatic Looms,



Filler-replenishing attachment for converting ordinary looms to automatic looms

Ltd., Brookhouse Mills, Blackburn, England, is said to be applicable to any make of loom, either underpick or overpick, using only one type of filling. Features of the attachment are the simplicity of the mechanism and the few alterations required to fit it to ordinary looms.

The attachment consists principally of a standard magazine holding twelve bobbins or cops, transferer mechanism, feeler, and three-try motion. When the feeler indicates exhaustion of the filling or the three-try motion registers exhaustion or breakage of filling on the active bobbin or cop, a single action inserts a new bobbin and discharges the one which is spent through a slot in the bottom of the shuttle. Co-acting with the transferer mechanism are two pairs of filling cutters, one pair to cut the thread from the old bobbin, and the other from the new.

A number of safety devices guard against damage to any part of the mechanism, while a trip lever permits the loom to be converted by one simple movement from an automatic to a plain loom or *vice versa*.

Gasoline Power for Cotton Ginning

THE application of gasoline power to cotton ginning is proposed by the Hercules Motors Corp., Canton, Ohio, following a study which this concern has made of the power requirements in that field. It is claimed that the gasoline engine, properly installed, would be a particularly economical form of power for cotton ginning—possibly providing a saving in cost of about 26c. per bale on a heavy season's run. It is pointed out that fuel is easily obtainable, installation costs are comparatively low, and repairs may be made by any automobile mechanic of ordinary skill.

It is proposed that the engine be enclosed in a dustproof house in order that clean air may be supplied to it. Instead of the usual radiator cooling, it is recommended that water drawn from an outside cooling tower or pit be used, and that an oil cooler be provided to further guard against overheating of the engine. Windows would permit the operator to observe the operation of the engine without opening the door, and an automatic alarm on the lubricating system could be installed to indicate any failure of the oil pumps or lines.

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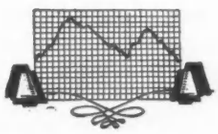

Wool Markets Probably Will Stabilize

Foreign Weakness Is Likely to Hinder Domestic Advance Despite Tariff

SUMMARY

Raw-wool prices show signs of weakening in foreign markets, and, although the tariff may maintain the differential in the domestic market, prices here are not likely to advance. Stability seems probable, but some further weakness is possible. Yarn and goods markets appear to be stabilized.

•

The analysis and forecast by Dr. Lewis H. Haney, Director, New York University, Business Research Bureau, which regularly appears on this page, considers various branches of the textile industry from week to week. The conclusions reached in the Analyst are mostly forecasts and generally apply to a time two or three months ahead. The Analyst is based on statistical data and does not reflect temporary trade sentiment.

THE month of June witnessed a number of important developments in the wool industry. The strike in Yorkshire, England, resulted in wage cuts and an increase in production which had the effect of depressing the prices of tops.

Foreign markets lost some of their strength, notwithstanding the fact that the Australian clip is being fairly well cleaned up and the new clip is expected to be 100,000 bales smaller.

The tariff bill has been passed, and that eliminates one factor of uncertainty. It has been an error, however, to attribute any large part of the depression in the wool industry to the tariff.

The decision of the Federal Trade Commission to prevent interference with wool goods prices is important in that a freer market may more quickly bring about necessary readjustments. Artificial methods of maintaining prices have been responsible for much of the present acute weakness in commodities.

The Favorable Factors

1. The new tariff law has increased the rates on raw wool up to 3c. per lb.
2. The old Australian clip has been moved fairly well. The new clip is expected to be 112,000 bales smaller.
3. The stocks of foreign wool in bond at Boston are the smallest in years.
4. Probably 85% of the new domestic clip is out of growers' hands.
5. Prompt shipments of raw wool and light stocks were reported during June.
6. Machinery was more active during May.
7. Yarn prices have shown more strength in recent weeks. The average spinners' replacement margin increased in June.
8. The statistical position of wool cloth is strong. Manufacturers' replacement margins stopped declining in May. The Wool Institute reports that there is now only six weeks' supply of cloth on hand.

The Unfavorable Factors

1. Foreign markets are weak. Prices are below the recent peaks. The settlement of the Yorkshire strike put an end to buying enthusiasm. London auctions opened with prices 5 to 10% lower.
2. Wool mill consumption during May was the lowest since early 1921.
3. Domestic receipts are heavy.
4. Bradford top prices have weakened as production increased, following the strike settlement.
5. Domestic top prices have weakened recently.
6. May production of clothing made wholly or partly of wool was 30% below a year ago.
7. Wholesale dry goods sales were slightly lower in May.
8. Automobile production is declining.
9. General business continues depressed and purchasing power is poor. Factory payrolls and employment were lower in May.

The unfavorable factors seem to have gained somewhat over the favorable factors during the last month. It is becoming clearer that, with acute weakness in world commodity prices, the recent rise abroad cannot long continue without a general increase in demand. The severity of the depression here is only now being realized, as the increase in industrial activity in the spring proved to be a temporary and rather artificial spurt.

Manufacturing Activity Mixed

The wool manufacturing industry during May made a somewhat mixed showing, in that mill consumption declined sharply while activity of machinery increased.

The seasonally adjusted index of average daily mill consumption was 71.0% during May, as compared with 83.3% during April and 110.3% in May, 1929. This index shows the severity of the depression in general business, and especially in the wool industry. In the first place, the index of wool mill consumption is one of a number of sensitive business indexes which fell during May to new lows for the present cycle. The improvement in general business from the first of the year was in the nature of a mere technical recovery, and the wool manufacturing industry fared no better. Not since February, 1921, has mill consumption of raw wool fallen to so low a level.

The increase in spindle activity during May is not easily explained, unless it proves to have been due to a tendency for spindle activity to lag behind consumption by a month or two. The index of spindle activity, as shown in the first chart, was 75.7% in May, against 67.1% in April and 100.05 a year ago. This is the second successive month of

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QUISSETT COTTON YARNS

increase for this index. The most interesting relationship between the indexes of consumption and spindle activity, however, is the fact that the former has fallen below its average relation with the spindle index for the first time since September, 1927. At that time, a sustained increase in mill consumption followed. In most cases, this same relationship between the two indexes has occurred shortly before the bottom of the decline in mill consumption has been reached.

Whether wool mill consumption will have a sustained rise soon, however, is doubtful. Most of the barometers of general business are unfavorable. The P-V Line is still declining and below normal, and this barometer forecasts poorer business in general. While there has been some tendency for the wool industry to deviate from the cyclical swings of general business during recent years, it is more likely that it will now be affected chiefly by the fundamental forces which brought about the general depression.

Raw Wool Prices Stable

Raw-wool prices, however, have ceased to decline. The June index of 65.4% of the average for 1921-1928 was unchanged from that of May. A year ago the figure was 91.2%. This recent stability was partly due to the firmness abroad, but now the strike settlement in Yorkshire has removed the factor of artificial scarcity, and once more prices are slipping in primary markets. Bradford top prices have weakened as production has been resumed. They have evidently discounted the decline in raw-wool prices at the July series of London auctions.

The tariff may lessen the influence of foreign prices on domestic markets, but only within certain limits. It is safe to say that the tariff increase has already been discounted marketwise, and that further weakness abroad would tend to put a damper on any considerable price rise here. The lower prices at the London wool auctions indicate that irregular stability seems to be the most that can be hoped for here.

Yarn and Cloth Statistically Strong

The worsted sales yarn markets are beginning to show the effects of curtailed production and firmer raw-wool prices. The Textile World index of worsted yarn prices in June was 78.8% of the average for 1921-28, against 78.3% in May and 94.1% a year ago. As a result of this stability in both the yarn and raw-wool markets, the average of replacement margins of spinners was unchanged. This check in the decline of the replacement margin was in line with the more favorable relationship which has developed between spindle and loom activity. Although the output of yarn increased as judged by spindle activity, wide-loom activity showed an

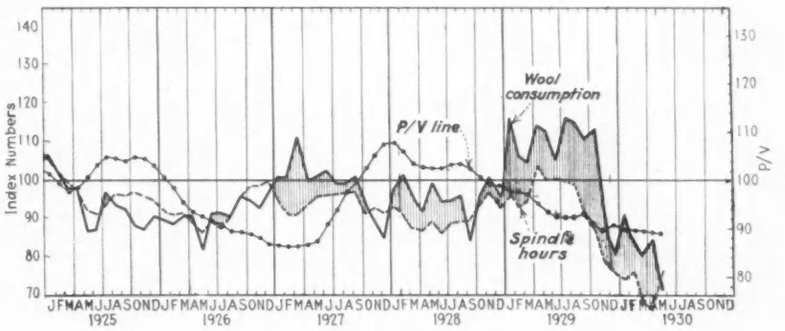

Fig. 1. GENERAL BAROMETER OF WOOL INDUSTRY: Wool Consumption—Grease equivalent; adjusted for number of working days and seasonal variation, 1921-1928=100 (Dept. of Commerce). Spindle Hours—Average of woolen and worsted spindles, per cent active hours to total; adjusted for seasonal variation, 1921-1928=100 (Dept. of Commerce). P/V Line—Ratio of general commodity price index to volume of trade (Bureau of Business Research).

Fig. 2. WOOL MANUFACTURERS' MARGINS AND ACTIVITY —Wool Manufacturers' Margins—Average of Replacement Margins; Wool Machinery Activity—Composite of Loom and Spindle Activity, adjusted for seasonal variation; Average 1923-1927=100 for both indexes.

even greater gain during May,—a fact which gives promise of maintained spinners' margins and higher yarn prices if the raw-material prices hold firm.

The cloth markets are dull, under the influence of reduced consumer buying power. But, although not quite so favorable as a month ago, a fairly good balance is being maintained between loom activity and wholesale dry-goods sales. Cloth prices declined less rapidly in May, and appear to be approaching stability. The decision of the Federal Trade Commission to prohibit agreements among wool manufacturers to maintain prices will tend to remove artificial restriction, but it is doubtful if cloth markets have been much affected by such restrictions, and prices of cloth probably were in line with supply-and-demand conditions before the decision was announced.

The Textile Trend

Cotton Textile Markets: A quiet week was met by cotton goods sellers, with the market recovering from the effects of an extended week end. Sales were considerably less when compared with the recent print-cloth activity, although prices were holding firm at unchanged levels. Cotton declined slightly at the outset of the current week, but sellers refused to trade, arguing that present levels already discounted 10c. raw material.

Wool Textile Markets

Tropical openings, originally expected during the week of July 7, are likely to be delayed until the middle of the month. Several lines are incomplete, and buyers do not show any great disposition to purchase summer clothing needs before then. Prices are still unknown. A few lines have been quoted at value, but preliminary signs point to a 10% reduction from last year. Plain weaves and solid colors are most important from style angle. Novelty worsted yarns active; staples dull between seasons.

Knit Goods Markets

Orders remain scarce in the hosiery market, but sellers express a more optimistic attitude. Reaction from retailers has been hopeful, and chain stores and independents are making many inquiries. Grenadine yarn hosiery gains slowly. Bathing-suit demand continued after the

MONOMAC SPINNING CO. *French Spun worsted yarns for knitting and weaving.*

ARLINGTON MILLS *Bradford Spun worsted yarns for knitting and weaving.*

ACADIA MILLS *Mercerized yarns—natural, dyed or bleached.*

NONQUITT MILLS *Combed yarns spun from American or Sakellarides cotton.*

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CHARLOTTE
Commercial Bank Building

holiday, although at an easier pace. Larger mills report a sound condition, with enough orders on hand to keep deliveries up for several weeks. Rayon polo shirts still leaders, but attention swinging over to fall numbers. Medium-weight sweaters improved, but still backward; heavyweights more active and some future business placed. Lightweight underwear moving steadily and making up for slow start. Small orders for athletic shirts and shorts aggregate good-sized total. Heavyweights continue slow.

Silk Textile Markets

Raw silk dropped to an all-time low when the exchange opened after the holiday. Several months were quoted at $2.75, which is 5c. below the previous low established in 1893 and repeated in 1914. Weakness shown in Japan cables was the prime cause. Buying was at a low ebb, with dealers in a very blue frame of mind. Thrown silk was sympathetically lower, although sellers were more hopeful of the outlook. Stocks are small, and mills continue under curtailed production. Spun-silk demand light, but market in sound position and prices firm. Fall broadsilks backward with greatest interest in all-rayon numbers. Summer lines well cleared out, and retailers buying chiffons and georgettes in sufficient quantities to relieve price pressure.

Restricted Mill Share Sales

Investor Interest at a Low Ebb in Listless Market

Boston.

ANOTHER dull week has passed in the textile share market with little genuine interest shown in the possibilities of selected good mill shares available at low prices. Textile shares in the New York and Boston exchanges were affected during weak days, but not conspicuously, American Woolen preferred maintaining itself consistently above 30. Amoskeag, Pacific and Arlington shares were firm throughout the week.

There were no new developments in the merger field during the week. A surprising inaction has appeared with no assignable reason. There is little available upon which investors can reasonably forecast movements. Curtailment is proceeding in cotton, while in wool the industry as a whole is at a standstill.

Probable liquidation in the near future of the Union Cotton Mfg. Co., Fall River, Mass., led to some active trading, several sales at 25 with a number of bids listed at around 20. At the Boston stock auctions 249 shares changed hands, the list quite firm. Ludlow gained 2 points to 138 and Farr Alpaca to 68.

Union Cotton May Liquidate

Excessive taxation and southern competition are advanced by the directors of the Union Cotton Mfg. Co., cotton goods, Fall River, Mass., for their recommendation to stockholders that the corporation be liquidated. Stockholders have been called in special session for July 23 to vote on the recommendation and authorize directors to proceed with plans. The corporation has been one of the most successful in Fall River and a consistent dividend payer. Quick assets, according to the last financial report, approximate $40 per share, the capitalization being $1,200,000. During the war substantial dividends were paid, and 6% has been the rate maintained since. Liquidation talk first became prominent when dividends were paid from surplus. The plant comprises three buildings housing 100,000 spindles and approximatley 3,000 looms, of which 800 are automatic. It is believed that a realty corporation could be formed to change over the buildings for lease to business enterprises.

The letter of the directors to stockholders states in part that the plant has not been making a manufacturing profit for the last three years; that of late years taxation of cotton mills has been out of proportion to their real value; that all goods which the company is adapted to make are more and more being manufactured in the South at prices which cannot possibly be met, this latter consideration being independent of present market conditions and appearing to be permanent.

An Adventure in Cooperation

Former employes of the New Bedford (Mass.) Spinning Co., cotton goods, are reported to be contemplating reopening the plant, and to have placed their plans in the hands of James T. Crowley, fromer office manager of the company. The plant closed down some weeks ago after running off the stock in process. Mr. Crowley believes the mill would have little difficulty in finding a market for its goods. At the time the cotton stopped moving through the plant last January it was making fine cotton handkerchiefs. "The tariff laws allowed Czechoslovakian and other foreign-made handkerchiefs into this country at a ruinous rate," stated Mr. Crowley, "but the new tariff makes it possible again for an American mill to compete." According to the plan, each operative of the company would be assessed 10% of his wages to provide a sinking fund. The operative, however, would not lose the money, as it would go toward a stock ownership for the employes, and when the assessment of each totaled $100, the donor would receive one stock certificate with full voting privileges. Workers in the mill eventually would gain control of the voting stock so as actually to own and control the plant, electing their own board of directors. Many of the old employees are still in the city and most of them have expressed eagerness to return to their old jobs under the proposed conditions. The consent of the present owners of the plant has yet to be secured. The move is not favored by labor leaders.

U. S. Worsted Balance Sheet

The balance sheet of the U. S. Worsted Corp., Boston, Mass., dated Dec. 31, 1929, filed with the Massachusetts Commissioner of Corporations was as follows: Assets: Real estate and machinery, $2,098,391; merchandise, $5,000; notes receivable, $3,000; accounts receivable, $21,596; cash, $135,035; securities, $271,493; stock in treasury, $77; accrued interest, $2,560; prepaid expenses, $20,691; deficit, $7,670,878; total, $10,228,721. Liabilities and Capital: Preferred stock, $3,448,900; common stock, $3,281,273 (consisting of 116,555 shares without par value); accounts payable, $3,498,548; total, $10,228,721.

Further Decline in South

Charlotte, N. C.—The market for southern cotton mill shares remained quiet and inactive throughout the week which ended July 5. The closing price representing the average bid of 25 common stocks stood at 73.80, or a net loss for the week of 92c. a share, according to the weekly summary as compiled by R. S. Dickson & Co.

Boston Stock Auctions

The following sales of textile shares were made at Wednesday's auctions:

Shares	Mill	Par	Price	Change
20	Ludlow	—	138	+2
6	Naumkeag	100	88	
2	Pepperell	100	85½	+ ⅛
45	Associated Textile	—	35–36½	
60	Farr Alpaca	100	68	+1
36	Berkshire, pfd.	100	69	—1½
50	Berkshire, com.	—	15	— ¼
219	Total			

Boston Wool Receipts

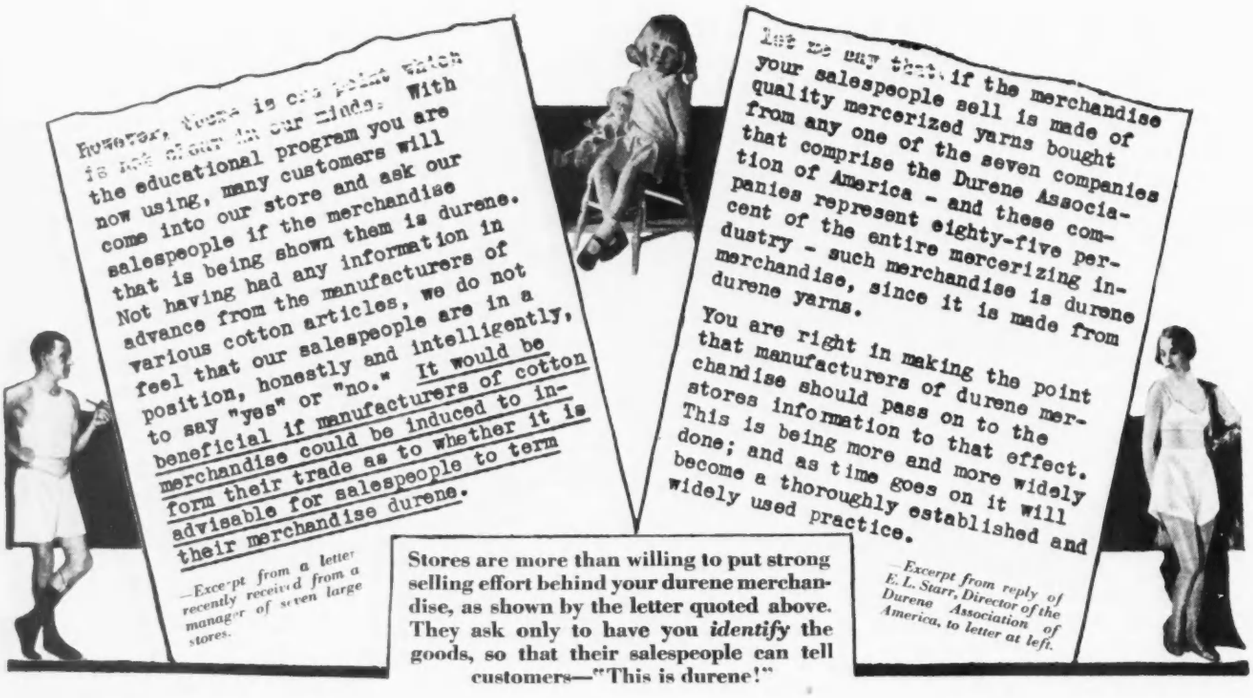
Receipts of domestic and foreign wools at Boston, also imports at Philadelphia and New York for the week ended July 5, based upon data compiled by the Market News Service of Bureau of Agricultural Economics, Department of Agriculture, are as follows:

Domestic	6,847,000	106,100,000	78,300,000
Foreign	349,000	42,565,000	69,601,000
Total	7,196,000	148,665,000	147,901,000
IMPORTS AT PRINCIPAL PORTS			
Boston	349,000	42,516,000	69,601,000
Philadelphia	306,000	29,657,000	44,168,000
New York		26,879,000	42,423,000
Total	755,000	99,052,000	156,192,000

"Manufacturers

of cotton merchandise *should inform their trade whether salespeople may term their merchandise* durene" . . .

says manager of 7 big stores


However, there is one point which is not clear in our minds. With the educational program you are now using, many customers will come into our store and ask our salespeople if the merchandise that is being shown them is durene. Not having had any information in advance from the manufacturers of various cotton articles, we do not feel that our salespeople are in a position, honestly and intelligently, to say "yes" or "no." It would be beneficial if manufacturers of cotton merchandise could be induced to inform their trade as to whether it is advisable for salespeople to term their merchandise durene.
—Excerpt from a letter recently received from a manager of seven large stores.
Let me say that if the merchandise your salespeople sell is made of quality mercerized yarns bought from any one of the seven companies that comprise the Durene Association of America - and these companies represent eighty-five percent of the entire mercerizing industry - such merchandise is durene merchandise, since it is made from durene yarns.
You are right in making the point that manufacturers of durene merchandise should pass on to the stores information to that effect. This is being more and more widely done; and as time goes on it will become a thoroughly established and widely used practice.
—Excerpt from reply of E. L. Starr, Director of the Durene Association of America, to letter at left.

Stores are more than willing to put strong selling effort behind your durene merchandise, as shown by the letter quoted above. They ask only to have you *identify* the goods, so that their salespeople can tell customers—"This is durene!"

Durene Association of America
250 Fifth Avenue, New York City

MEMBERS

ABERFOYLE MANUFACTURING CO.
Philadelphia, Pa.

AMERICAN YARN AND PROCESSING CO.
Mount Holly, N. C.

DIXIE MERCERIZING COMPANY
Chattanooga, Tenn.

HAMPTON COMPANY
Easthampton, Mass.

CLARENCE L. MEYERS, INC.
Philadelphia, Pa.

SPINNERS PROCESSING COMPANY
Spindale, N. C.

STANDARD-COOSA-THATCHER COMPANY
Philadelphia, Pa.

Durene

Quality begins with the yarn

Decline in Burlap Futures Causes Buying Hesitancy

Prices of futures on the burlap exchange declined a few points further at mid-week. Buyers were indifferent and bidding was too low to meet views of sellers.

In the spot market there were reports of fair interest from the Middle West although not much of this developed into actual business. No important sales were reported in the spot or afloat market, and the declines in futures caused buyers to hold off.

The 8 oz. 40s for spots and two weeks arrival were 4.85-4.90c.; July shipment, 4.90c. The 10½ oz. 40s for spot and afloat were 6.25-6.40c.; July shipment, 6.40c.

Imported Rayon in Bond

The Department of Commerce, Washington, D. C., reports stocks of rayon held in bonded warehouses on May 31, 1930, as follows:

Description	Pounds	Value
Rayon waste	40,854	$14,130
Staple fiber, waste not advanced further than sliver or roving, and yarns made from waste	227,686	145,581
Yarns, threads and filaments	2,955,820	1,792,876
COMPARATIVE FIGURES FOR APRIL 30, 1930		
Rayon waste	47,918	$15,155
Staple fiber, waste not advanced further than sliver or roving, and yarns made from waste	225,147	144,723
Yarns, threads and filaments	3,110,992	1,913,130

Passes Unemployment Bills

Steps to alleviate the stresses of future unemployment were taken by the House on July 1 when two of the Wagner unemployment bills were passed. These measures provide for the advance planning of public works during period of depression and for the compilation of unemployment statistics by the Labor Department. No action was taken on the third Wagner bill that proposes to set up a federal employment exchange system and it is believed that this measure is doomed. All of the Wagner bills have been approved by the Senate.

Acala Considered Best Cotton for Southern New Mexico

"Cotton Varieties," is the title of Bulletin No. 181, issued by the agricultural experiment station of the New Mexico College of Agriculture and Mechanic Arts, State College, N. M. The authors are J. C. Overpeck and W. T. Conway.

The type of soil upon which varieties are grown is apparently an important factor. The Acala is undoubtedly the best variety on soils of heavy texture which are prevalent in southern New Mexico. On sandy types of soil, probably Lightening Express, Delfos, or similar sorts will yield as much or slightly more.

Better Feeling in Cotton Yarns

One Organization Reports That Half-Year Volume Betters 1929

PHILADELPHIA.

CONDITIONS in sales cotton yarn market are not satisfactory and yet matters are far from being bad as many are endeavoring to paint them at present. To substantiate this we point to one of the largest yarn selling organizations in the country which reports that its dollar and cents business the first six months of this year was larger than for the same period of 1929, which was a satisfactory one for industry in general.

This is especially notable in view of the fact that cotton and yarns are now selling at 5 to 7c. lower than during the corresponding period in 1929. It shows that there is business passing and those who are pushing for it instead of bemoaning lack of demand, are the ones who are showing fair results in their statements for the half year. It is harder to get business, but goods are being consumed and yarn is needed.

The concern in question goes further and reports that dollars and cents business for first six months of this year represented one of best half years they have experienced in five years. The size and character of the company gives considerable weight to the statement that conditions could be much worse in cotton yarns than they are.

ACTIVE MONTHS COMING

In addition the busy time of the year for selling cotton yarns is approaching. August normally shows an expansion in demand and this year will prove no exception to the rule. From that month on, interest increases with peak sales usually being seen in October and November with a slackening from that time on until the end of the year. There will be little activity for the next two weeks, but after that time sales are expected to mount if past performances of the market are any criterion. Improvement is seldom witnessed in July.

The situation in carded knitting yarns is better than that in carded weaving counts both in respect to deliveries being made on old contracts and stocks carried. It is the accumulation of large stocks of speculative counts of carded weaving yarns that is continually forcing these quotations lower faster than cotton is declining. Knitting counts are holding better, and stocks have been kept lower by these spinners than in case of weaving numbers.

KNITTING DELIVERIES GOOD

Deliveries to knitters are holding up well in both carded and combed, little new business being placed. Medium-weight counts have the call and this condition will continue until next winter when manufacturers again turn over to light-weight numbers. The active months for purchasing underwear yarn are first three of the year and the next buying wave takes place in October, November and December. Little new business of account will therefore come to these spinners until next fall.

Knitters are more optimistic than previously since cotton and yarns have declined to greater extent than prices of their goods. Manufacturers will be able to make a larger profit at current prices as conditions now stand, than they could when level was much higher. All they demand is that stability be established soon.

With the exception of plush yarn sales to one large cotton plush manufacturer sales of weaving yarns during recent weeks have been small and prices have sagged further during the last week. Spinners are quoting 20s-2 warps of ordinary grade at 25c. to 25½c., majority being at higher level while sales are made here at 25c. and slightly under; sales of 30s-2 warps have been reported at 30c. and under, spinners holding this count at 30c. to 30½c. These two numbers are weakest of the entire weaving list due to accumulations of stocks.

There has been softness apparent in combed yarns single and ply, the former having reached new low levels in price for a number of years. Mercerizers have placed a new and lower price list into effect, quoting on the basis of 76c. for 60s-2 and one mercerizer states that they are selling under that level. Specifications in mercerized yarns are small.

●

NEW YORK—The holiday influence had little effect in the carded yarn market. A few users found themselves with small supplies of yarns on hand and in the forepart of the current week there was a slight increase in poundage. Prices were at unchanged levels with the customary amount of confusion.

Spinners for the most part were holding prices above the actual trading basis. Several dealers told of taking orders at less than spinners' quotations and trusting to luck that future developments would enable them to come out with a whole skin. One seller summed up conditions with the phrase, "We are busy every day—swapping a dollar for 90c."

Bag manufacturers have placed a moderate number of small sized orders for sewing twine, but show no disposition to purchase for stock or future delivery. The 20s-2 warps are available at 25c., with 30s-2 at 31c. A few

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offers on the latter count have been current at 30c. for spot delivery.

On the brighter side, there seems to be a greater disposition for spinners to curtail operations and endeavor to work off stock yarn at fairly respectable prices. On the other hand there are a few spinners trying to run full and quoting ridiculous prices in order to get the limited amount of available business.

●

BOSTON.—A comprehensive view of the cotton yarn market at this time, while inherently bullish for the long pull, discloses a very ragged situation featured by a complete domination of the market by consumers, still lower prices, spotty purchasing, an uncertain cotton basis, and continued curtailment in spinning mills. The cotton yarn market is more under the control of the law of supply and demand than is the cotton market, which has been the object of artificial restrictions and stimulations as well as subject to the unpredictable climatic influences on the growing crop. Cotton yarns have not only the natural troubles of a natural market to contend with, but have been compelled to do business for the year to date on an artificial and shifting raw material foundation. The orgy of yarn over-production witnessed last year is now being rapidly corrected by what may easily run into the other extreme of unnecessarily sharp curtailment helped along by the general business depression which has not yet fully run its course.

Anything like normal profits long ago disappeared from the market. Some yarns can be bought so close to cost that spinners refuse to accept future business at quoted rates. The situation has reached the point where the next major change will unquestionably be for the better. The adjustment taking place is severe but thorough. Depletion of yarn stocks in the hands of consumers, distributors and spinning mills indicate very clearly that any demand of consequence reflecting itself in the yarn market will bring about a return to normal conditions. Some distributors believe that a reversal of current conditions will be seen before the month is over, while others, less hasty, predict that the second half of the year, as a whole, will show a desirable and substantial contrast to the first half of the year.

Styles Affect Worsted Yarns

French Spinners Witness Marked Changes in Demand

PHILADELPHIA.

THERE has been little new business placed during the last two weeks, but deliveries of men's wear yarns are holding up well, these manufacturers still being fairly busy on duplicate orders that will keep them engaged until the middle of next month. Men's lightweight fabric lines will be opened by majority of local manufacturers in September. Outerwear yarn demand is dull except for several novelties which are consuming fair sized quantities.

PRICES HOLD WELL

Although new business is small, prices are holding well and spinners have made few price changes within the last month. Several are offering outerwear counts on basis of $1.05 for 2-20s, 50s, but majority hold for their former figure $1.07½. A reduction has been made in 2-40s, 64s, by French system spinners, this count being sold at $1.60, comparing with the former level which was 5c. higher.

Lack of demand for the latter is the reason. This year there has been little demand for this count which last year was one of the largest, if not the best-selling count that French system spinners handled. This is because jersey dress fabrics are not selling this year so well as they did last, these knitters now being interested in boucle type fabrics, yarns for which are being supplied by novelty spinners in both rayon and cotton.

STYLE CHANGES AFFECT SPINNERS

Worsted spinners believe that the style trend away from them this year will not prove permanent and that next season demand for 2-40s, 64s, will come back, it having been felt that this count had become a staple. Whether this develops or not, the fact is it has been far from a staple number so far this year and is felt by spinners who turned bulk of their machinery to it last year. A number of manufacturers using it are now asking for 20s in the single.

Both manufacturers of bathing-suits and spinners catering to this trade are anxiously awaiting the reception they will find next season for garments from single counts spun from finer wools. This year more manufacturers turned to use of single counts and more turned to use of 64s grade who formerly specified quarter blood. Those using the latter assert 64s will not give good service while the manufacturers using finer grade assert their garments will prove superior in comfort of the wearer. Demand for 1931 bathing-suits will answer this argument, and spinners will know in next few months.

June was a better month in respect to total volume of sales yarn moved than May, but trading so far this month indicates that July will not equal June unless sentiment changes quickly. This, however, is being predicted in many quarters and indications are that there will be a noticeable improvement before July is over, goods jobbers stating that they expect buyers to begin operations in this time for fall merchandise.

SPINNERS MORE HOPEFUL

Spinners are more optimistic than they have been for several months and confidently believe that the next few months will see firmness and more activity for sales worsted yarns. Stocks of yarns in all hands are small, and, in view of fact that fall is usually a good time of year for these spinners, it is conservative to expect considerable improvement in demand within the next month. Trend of prices, while fairly steady, will be affected by the movement at London wool sales.

Should world wool prices show signs of having reached bottom, there would quickly be a wave of buying, but at present few have had the courage to buy in anticipation of receipt of good business. Buying of yarns is being delayed until the last minute, and, when goods orders are booked, they expect spinners to have the yarn on hand for immediate shipment. In instances this has been found to be impossible, spinners following manufacturers in keeping their inventories low. Small stocks of yarns will help spinners when demand expands.

◆Throwsters Slightly More Optimistic

THROWN silk markets opened quietly after the holiday although a slightly improved inquiry caused throwsters to view the situation more hopefully. Prices, however, turned weaker in sympathy with the declines in the raw silk market.

Actual trading was scattered but, taking an all-over experience, the heavier crepe yarns came in for the greatest share of interest. Grenadine twist yarn, which had fallen off immediately preceding the holiday, came to the fore again, and several dealers spoke of additional encouragement in the field of this product.

Much of this week's trading has been for spot, although several consumers were not lookng for anything closer than three weeks' delivery. A greater number of throwsters have expressed the belief that contract buying is likely to start up once more before very long.

Production has been on about the same basis as in the previous week, or about 40% operating capacity for the average thrown yarn mill. A divergence of opinion exists among certain factors as to the advisability of curtailment. Present stocks, together with current low prices, cause many to lean

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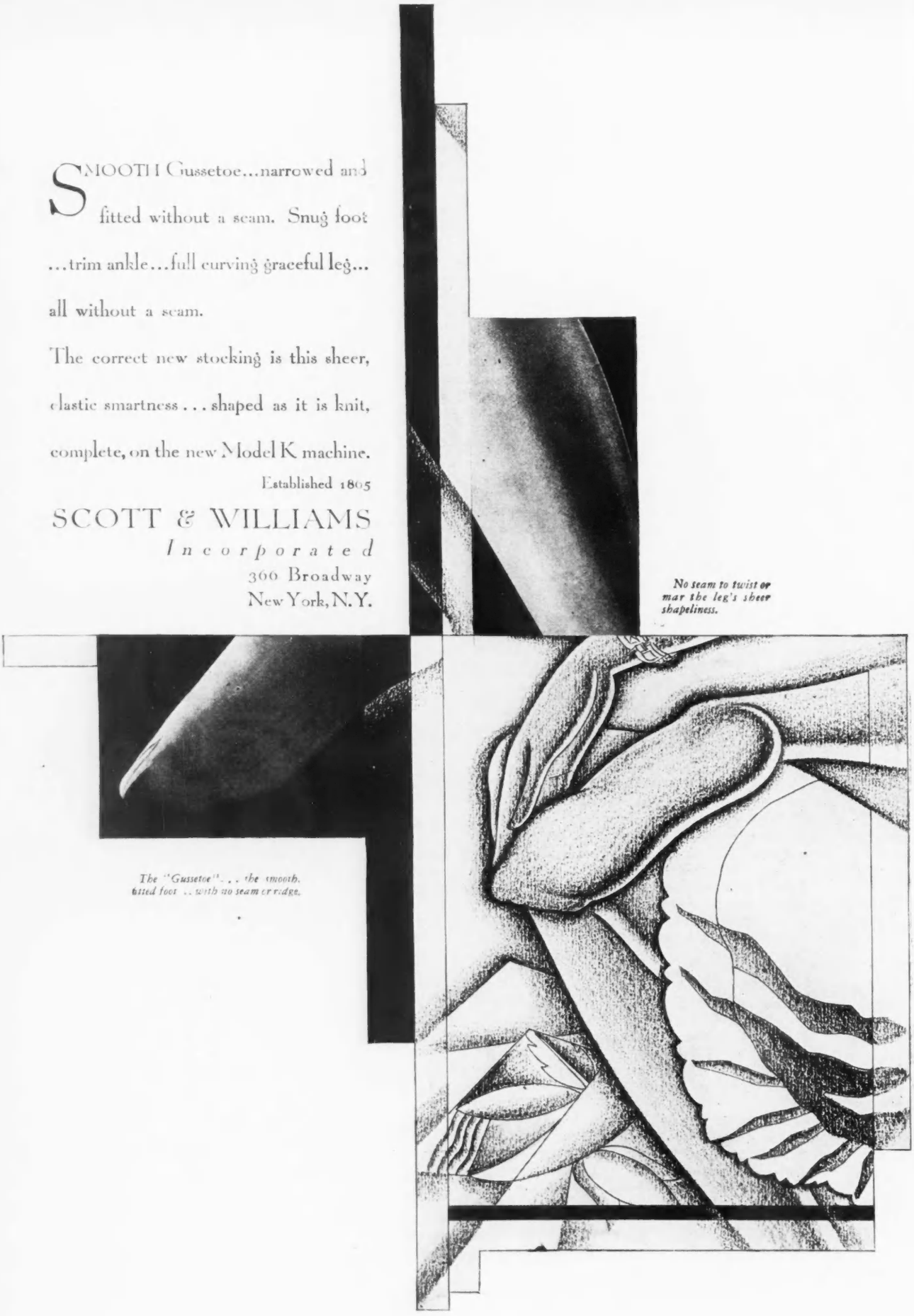


No seam to twist or mar the leg's sheer shapeliness.

The "Gussetoe"... the smooth, fitted foot ... with no seam or ridge.

toward increased curtailment or at least maintenance of the present schedules. Others feel that it is necessary to keep a varied stock on hand of numbers for fall lines.

◆Spun Silk Outlook Promising

SPUN silk prices are steady and show practically no change under slackened demand. Spot trading is at a minimum, but dealers regard the present situation as merely temporary and have the utmost confidence in the future. The fall season is expected to be short, but active.

Broadsilk mills are purchasing in small lots for October-November delivery. The trade firmly believes that rough weaves, shantungs in particular, will repeat the success of the current year. Wool goods mills have shown interest, but in a spotty way. Spring lines in this trade need much working over before ideas can become more definite.

It was pointed out that unless raw silk should take an unexpected spurt in the next 30 days, it is probable that spun silk will supplant rayon in numerous instances. A large converter, who in the past has developed a great many silk-and-rayon cloths, stated that this was the season to put all-silk cloths on the market. For his part he intended pushing silk warp and spun silk filling fabrics to the utmost and was confident of a favorable trade acceptance.

Slack Rayon Buying Noted

Silk Decline Affects Many of the Finer Deniers

RAYON markets continue to drift along without showing much change from the previous week. The rumor factory has been busy turning out various reports of price cuts which has naturally added to the hesitancy among consumers. Representative of one of the largest producers stated that no immediate action was contemplated by his organization. For the present anyway, this company will maintain list prices and wait for an upturn in demand. It was admitted that they were holding the umbrella to an extent and losing business due to sellers of 80c. inferiors.

KNITTERS BUY FOR SPECIALTIES

The most active buyers have been the knitters, but even this trade was characterized as lacking a "kick." This end has been well sustained by the active consumer call for polo shirts and underwear which manufacturers believe will carry through the summer. Weavers have been almost universally hesitant, and have placed yarn orders only in exceptional cases. Commitments have been made by broadsilk mills having an established reputation for their products, or in the few instances where yarn stocks have to run very low.

The continued decline of raw silk presents an additional problem to synthetic yarn producers, especially those making the finer deniers. There has been a reflection of this already in the lessened call for 100 deniers to go into rayon crepes. The low basis of silk may conceiveably spur consumption of all-silk fabrics. The possibility exists that spun silk filling may be used in conjunction with silk warps and to an extent supplant rayon in this field.

CURTAILMENT PLANS

Increased curtailment rather than price cuts may be resorted to as a means of clearing up the present backwardness among customers. No new reports were given out as to the percentage of operations, but all were in sympathy with the idea of not exceeding present output.

◆Cotton Waste in No Large Accumulation

BOSTON.

WITH cotton well below 14c. for the entire week, little or no assistance was derived from that quarter. The cotton waste market is more susceptible to cotton fluctuations than is the wool waste market as related to its wool basis. Inquiry confirms the opinion that supplies available are not particularly large and that neither in comber nor threads is the stock at all burdensome. Both these classes of wastes are meeting with curtailment, the comber because of unsatisfactory business in the fine goods mills and the threads because of the general sharp reduction in spinning schedules.

SMALL SALES, LOW PRICES

There are no large transactions in wastes occurring, but a number of small sales total a fair aggregate. There is nothing encouraging about prices at which dealers have to sell. In several sections of the market peeler comber sold at 11½c., Sak. comber at 10¾c., Egyptian comber, 10 to 10¼c. Strips were on the low level of the year at 9½ to 10c. with a demand for Upland strips at 7½ to 8½c. A little inquiry was seen for spinnable fly on a 6½ to 7c. basis and the best picker brought 5c. Single spooler was fairly firm at 9c.

The business arriving for cotton waste is scattered thinly over the trade, few houses doing anything like a normal volume. Commission sellers are unloading certain materials in which is considered fair competition with the several contracting houses. Taking the market situation as a whole, for some time it has been the most exasperating and profitless proposition seen for years. It is not alone that cotton waste houses are finding the going difficult but many of the large shippers and merchants. As a case in point a well-known house with extensive connections in specializing in Egyptians and similar cottons went out of business July 1. It is believed that the 7c. per pound duty on extra staple cotton was one of the main reasons for liquidation.

◆Rayon Waste Slow But Improving

RAYON waste markets are quiet with prices nominally unchanged. Manufacturers can see little ahead that will give any indication of fall prospects. At times there has been a spasmodic interest from garnetters interested in the wool goods trade, but little actual buying has taken place. Woolen and worsted manufacturers are uncertain when they will start active production for the coming season. Present reports indicate that spring lines will not be opened until well into September. If such is the case, waste dealers do not expect any sustained call from this trade for several weeks.

Waste dealers, however, are far from being pessimistic. Actual business is light and spotty but inquiries are a bit more plentiful and some trades have been sampling fairly liberally. A slow comback, starting around the last part of July, is looked for.

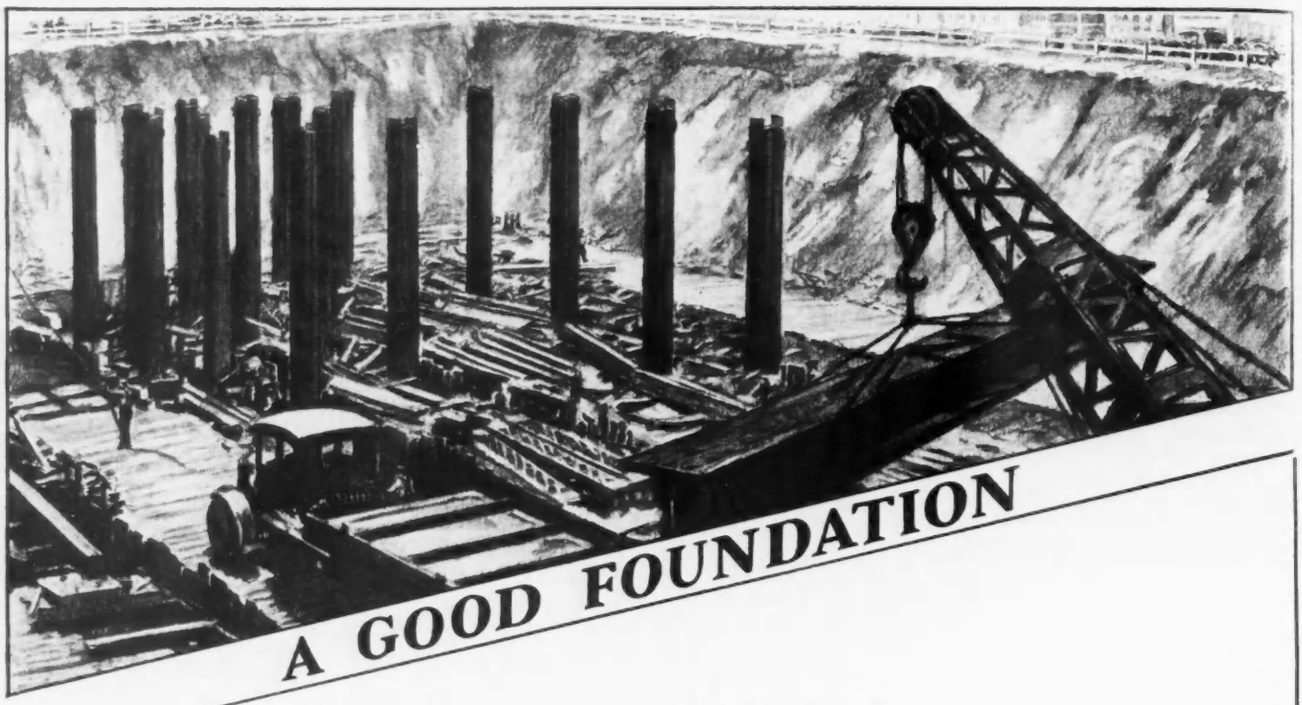
◆Wool Substitutes Move Sluggishly

THERE is no increase in business for wool substitute manufacturers in immediate sight and unless a change for the better appears in the near future further curtailment of operations will be necessary. The old rag market was sluggish and easy throughout the week, and, while in some quarters larger movement was reported in knit stocks, this did not receive general confirmation and may be ascribed more to the expectation of what ought to happen rather than to an actual occurrence.

The usual lines of standard rags, black and blue worsted and serges, light hoods and fine light merinos, moved occasionally in small lots to purchasing mills. Some graders quoted white knits from 28 to 29c. in the attempt to move the rag, not meeting with much success.

WOOL RAGS POTENTIALLY PROMISING

The market has not yet recovered its confidence. In a few weeks from now it may awake to the fact that it is really



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The new Wildman Full-Fashioned Hosiery Machine has been built *right*, from the ground up. The *heavy base* upon which the legs rest is one of the principal factors in the elimination of vibration and its accompanying dangers.

Write for further information.

Wildman Mfg. Co., Full-Fashioned Division,
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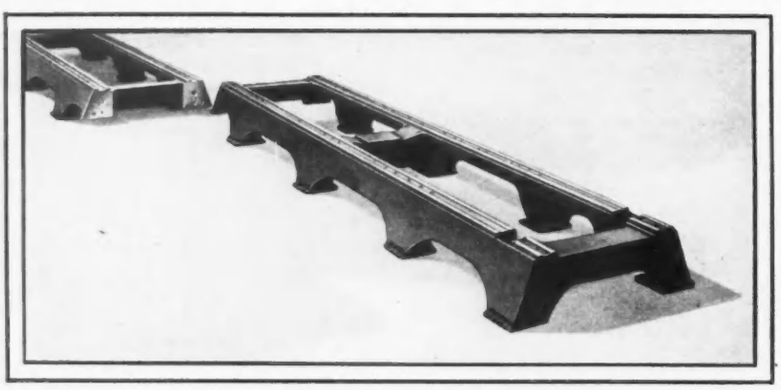


WILDMAN
THE WORLD'S STANDARD

WILDMAN

FULL-FASHIONED HOSIERY MACHINE

in a stronger position than believed, that the tariff now in force, given anything like a normal mill demand, will bring about a higher level of values. The higher tariff has tended to strengthen sentiment in the clip market but such sentiment has not been confirmed by any show of mill interest. No attempt is seen anywhere to discount the higher tariff.

In the Bradford market it is thought that American buyers may be inclined to operate now that the tariff is finally settled. This, however, is not likely to be the case until the mill demand in the Boston market is much more active than it is at the present time. Bradford is finding it no easy matter to sell wool waste at this time and there is very little to choose between the foreign and the Boston market in this respect.

◆Noil Price Normal to Wool Value

THE noil market seems to be in a fair position to take advantage of increase in mill business in the near future. These materials are stable commodities, always have a value, always good property to hold when acquired on a reasonable basis. In the early part of the year the low level which the market reached discounted about the worst that could happen, and, as the demand for fine noils at the low prices available was very substantial, the entire market finally recovered from its weakness and for the last two months has been operating moderately on a firm basis. Everything now depends upon the ability of manufacturers of certain types of woolen fabrics, of broadcloth for women's wear in particular, to impress the goods market with the necessity of taking a more optimistic view of the public's demand for necessary clothing. The price situation no doubt will become more of an active feature in the weeks ahead and woolen manufacturers may move into a better competing position.

Fine Noil 80% of Wool

Mill output in May showed a gain of about 7% as compared with April, but the additional supply is not likely to depress the situation. The woolen consuming branch maintained its April activity but showed no gain for the month. Fine noil price at this time seems to be well established on the basis of a normal ratio to fine wool. The average price of fine and fine medium wool for the year 1926 taken as the base year was $1.03 while the average price for fine noils during that year was 83c. or approximately 80% of the fine wool price. At the present time, fine and fine medium wool is 72c. and fine noils are 58c. which price is 80% of the wool basis.

In the Bradford market the ending of the strike and the resumption of work in the commission combing plants is bringing about a larger output of noils, and, as the demand is very thin, this foreign market is not so strong as it was. Bradford is looking to America as usual and hoping that some export business will develop now that the tariff is finally settled. The French noil market, which has been quite strong, has been affected by a change in the fashions of women's hats, the felt hats in which choice noils are used being displaced to an increasing degree by the vogue for small hats made from the same materials as the dress.

Cotton Steadies at 12½ to 13c.

Crop Progress Views Qualified by Weather Uncertainty

FROM a news standpoint, and in its bearing upon the fundamental question of next season's supply, the feature of the week was the Government report of Tuesday, estimating the acreage of cotton under cultivation as of July 1. This report was quite closely in line with the average of the private reports which preceded it. It pointed to a decrease of 2.7% in acreage, as compared with the revised figures on the acreage under cultivation last year and placed the area at 45,815,000 acres. This, of course, does not settle the question of the crop. The final yield per acre is the greatest uncertainty in production, and is one which on July 1 is still before the trade, no matter how promising the end-June prospect may appear. The acreage figures, being so nearly in line with anticipations, had little or no effect on the market, but the anticipations were bearish in comparison with the reduction which had been asked for by the cooperatives last winter. The official acreage estimate, of course, will be taken as the basis for all calculations of the crop in bales based upon estimated yields per acre.

Market Has Been Quiet

The market, which appeared to have been fairly well evened up in advance of the three-day adjournment, has been comparatively quiet, notwithstanding the interest taken in the showing of the acreage report. A belief that the crop was making fairly good progress, combined with talk of continued indifferent trade conditions, was reffected by some selling on the bulges; but offerings were not aggressive, and declines again seemed to attract some buying as the price of new October contracts approached the 12½c. level. Three times within the past month new October has sold off to within a few point of 12½c. It touched 12.59 on the decline of June 18, and, after advancing to 13.30, sold off to 12.55 for that position on June 25. It again worked up above the 13c. level, but following the Government report of Tuesday, sold off to 12.56.

It is not clear that the buying responsible for checking the decline around this figure reflected an increased demand from the trade. It may have been that in all three instances, declines have been checked and rallies promoted by an improved technical position. Nevertheless, the market has shown rather a steadier undertone, which may reflect recognition of the fact that end-June crop prospects are usually the best of the season, and that at the beginning of July the crop is just entering the most critical part of the growing period.

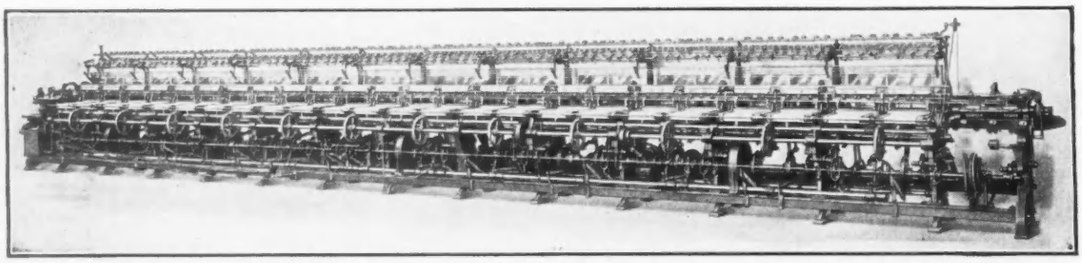
Condition Reported Above Average

According to the private end-June reports, the condition of the crop, on the average, is around 72%, which is probably somewhat above the ten-year average. The Fossick Bureau of Memphis estimated the conditions as of July 1st at 73.2% and placed the indicated crop on the basis of the Government's acreage figures at 14,450,000 bales. Beginning with such a prospect, final yields may be either much lower or much higher, depending upon the character of the weather during the balance of the season. The ten-year average yield per acre based on the Government acreage, with an allowance of 3% for abandonment, would be 14,250,000 bales. Many believe that damage from the boll weevil will be smaller this year than the average, and allowance may be made for that factor in yield calculations by some of the private authorities.

There is almost as much uncertainty as to next season's probable world requirements as there is with reference to the acreage. Latest statistics indicate that this season's consumption may fall somewhere between 13,200,000 and 13,400,000 bales. These figures, of course, reflect a time of rather unusual depression in the textile industry, and can hardly be more safely accepted as an indication of consumption during the present season than the big consumption of 15,780,000 bales reported in the season 1926-27, when mill production was over-stimulated, perhaps, by ample supplies and low prices for American cotton.

●

Boston.—Recent activity in extra staple cotton has been small, the holiday cutting down operations. There is little buying interest of importance. Curtailment in the New England fine goods mills is increasing and the cotton de-



The Reading Full-Fashioned Knitting Machine as it stands today — after 32 years of development — is the lowest priced, highest producer ever offered.

Is this a record?

Scarcely three months ago a new mill* located *in virgin territory* started operating with Reading Machines and a green crew. Today these newly-trained knitters are producing 18 dozen pairs per machine per shift.

If this is a record you can duplicate it —provided you give your apprentices the advantages of Reading Full-Fashioned Knitting Machines.

*Name on request.

TEXTILE MACHINE WORKS - READING - PENNA.

The "READING" Full-Fashioned Knitting Machine

mand is confined largely to odd lots which are still obtainable at cheap prices. The selection afforded by odd lots available is narrowing considerably, and along with this there is a distinct stiffening observable in round lots. More mills, it is said, are finding it necessary to bid for round lots if they expect to cover their requirements until the new crop staples begin to arrive.

Limited interest is seen in very long staple cotton. Selected shorter cottons are moving in a moderate way at prices quoted a week ago. Domestic spinners are looking for bargains mostly against immediate needs. Tire fabric mills are less active in buying than they were, but are developing some interest over the relative advantages of Egyptian and similar peeler staple. Spinners are bidding prices so low that few merchants are willing to accept because of the heavy losses that would follow such sales. There is very little business being done except where concessions are available.

The new tariff imposes a heavy burden on foreign long staples, especially Egyptian Uppers, and, with the crop outlook poor in the Mississippi Delta, the principal source of supply of similar cottons in the United States, there seems little occasion to expect lower prices on these styles. An important question is whether the tire trade will be able to absorb the 7c. duty on Egyptian cotton, or will revert to native American varieties to substitute for the Egyptian Uppers and the Sakellarides used in the production of high-priced tires. Some believe that 1 5/16-in. peeler cotton may take the place of Egyptian Uppers, and are expecting possible sharp increases in the price of peelers of medium length staple, the supply of which is apparently not sufficient to cover any very sharp increase in consumption without lifting prices. It has been more difficult recently to find offers of 1 5/16 in., and this has been one of the recent developments in the extra staple cotton market.

●

MEMPHIS, TENN., July 7—Inquiry for cotton for deferred shipment seems to be increasing, but, owing to differences in price ideas, little business is resulting. Mills are trying to buy at lower basis than merchant ideas of normal, while the shipper is asking more than a normal basis. The shipper takes the position that with something like 1,250,000 bales likely to be held off the market by the stabilization corporation for 18c. or more, a risk is involved, especially on shipments this side of the turn of the year, that warrants a higher basis. While this applies more definitely to cottons up to and including 1 1/16 in. than to longer cottons, the asked basis on staples is full.

Basis on staples was held up at this time last year by unfilled commitments which were forced to await arrivals from the new crop. Early in July last year strict middling 1 1/8 in. staples were quoted at 350 on October; when these commitments were filled basis broke to about 100 on. The present official quotation on strict middling 1 1/8 in. is 225 on October, 1 5/16 in. 350 on and 1 1/4 in. 850 on. This represents an advance from the previous week of about 50 points on 1 1/8 in. and 1 1/4 in. with 1 5/16 in. about unchanged. Business for immediate or nearby shipment is extremely quiet, with export business practically nil.

Moderate demand for strict low middling to strict middling 1 3/32 to 1 1/16 in. is credited to makers of tire fabrics but the supply is limited. It is necessary to comb the market for even small orders and to pay rather full basis. Otherwise sellers appear to be increasingly on the defensive.

A few scattered showers have occurred recently, but, generally speaking, the central belt has been without rainfall since May 18. The weather since about the middle of June has been very hot and damaging to crops other than cotton. Early cotton is not suffering but late cotton is extremely small and at about a standstill. The southern half of the Yazoo Basin (delta) in Mississippi is unusually poor; this section was afflicted with torrential rains during the first half of May, got rather badly in the grass and stands were broken in getting out.

It is too early for definite conclusions but some competent crop observers are predicting that the delta will fall short of last year's production by fully 200,000 bales. The favorable factors are clean, well cultivated fields, abundant labor supply and the most generous use of fertilizer ever accorded the delta crop.

Wool Trade Awaits Business

Large Selection of Domestic Wools at Lowest Level for Years

BOSTON.

WOOL prices are quite firm on Summer Street though the mill demand is not especially active. Large incoming quantities of domestic wool are keeping the wool district busy warehousing and grading, and providing a large selection for the convenience of manufacturers. It is believed in some quarters that about 85% of the clip has passed out of the hands of the growers.

The second half of the year opens in the wool district with a much more encouraging view than was possible at the beginning of the year regarding the ability of the wool trade to secure a good percentage of the clip in face of the strong competition of Government aided cooperatives. It is even admitted now that the big pool may prove a strong stabilizing factor during the marketing of the clip and that the competition of the national pool is not likely to bring about any severer competition than has been seen within the wool trade itself within the past few years.

WOOL TRADE CHANGING

The year 1930 is likely to demonstrate several features never before seen in the wool trade. The competition of the trade with the immense wool pool supported by Government finances is of course unique in the history of the trade. Early in the year the wool trade association decided to discontinue its annual inventory and on the top of this comes an announcement that the wool trade will forego its annual outing. The old conservative mind of the market has been shaken out of its accustomed repose and the end is not yet, as witness the proposal to modernize the wool trade through the institution of a futures market in tops.

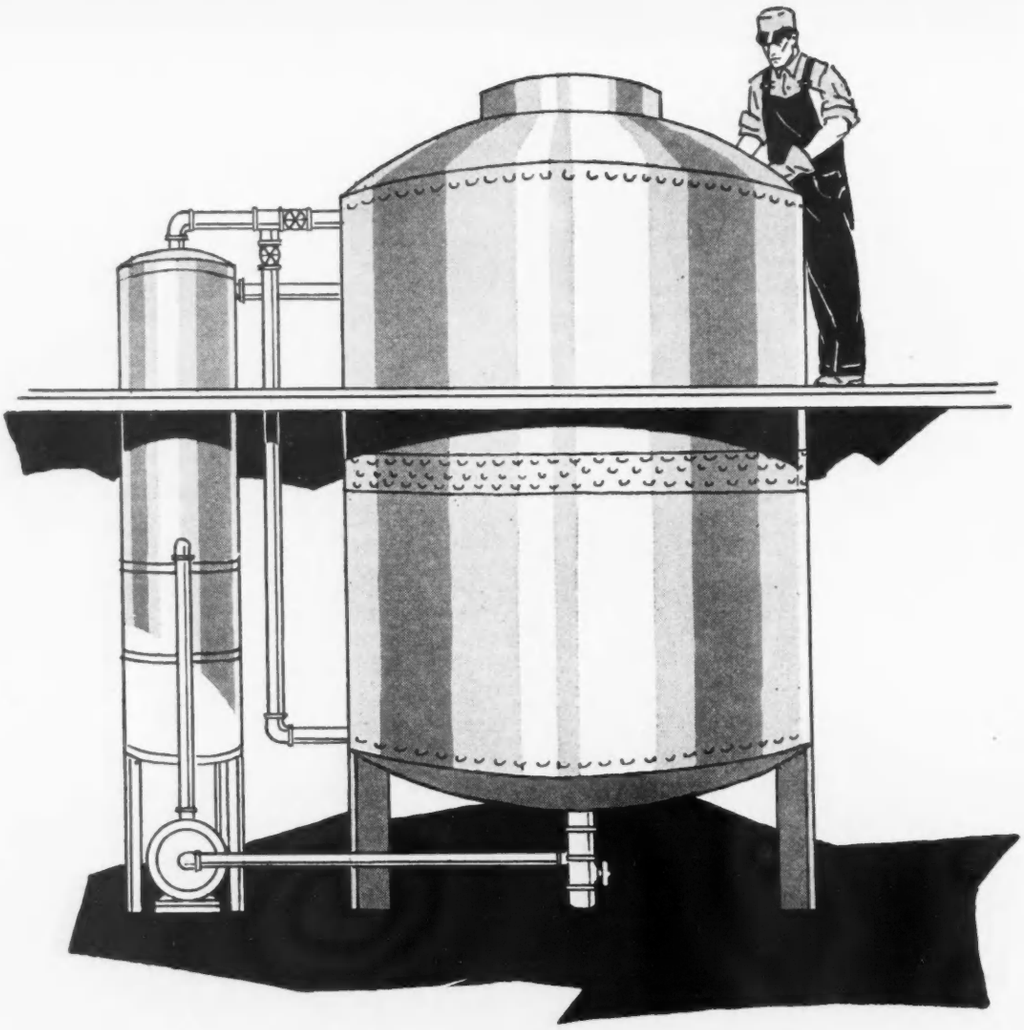
DOMESTIC WOOLS CHEAP

There is at this time probably less foreign wool in the United States than in any year since the conclusion of the war, and there is also a higher tariff with the exception of the emergency tariff in force for a short period only. Domestic wools are on a low cheap basis, the Ohio wools for example about 4c. per grease pound higher than July, 1914. Stocks of woolen and worsted fabrics have been so greatly depleted that a sudden outburst of activity in the goods market would not occasion much surprise.

Consumption of wool in May showed a net decline for the month of 4,153,000 grease pounds and was at the low point for many months. The decrease was entirely in foreign wools, chiefly of the carpet variety. Consumption for year to date for mills reporting, approximately 85% of the entire industry, shows the large decrease of 59,362,000 grease pounds over the corresponding period of last year.

WORSTEDS GAIN IN MAY

Worsted manufacturing showed a 10% gain in activity in May as compared with April. Both big branches of wool manufacturing in May were running around 80% of the average activity of 1926 which is generally taken as a base year. Machine activity in May was featured by a sharp advance in worsted spindles and combs, while woolen spindles and cards were prac-



R&H INTRODUCED PEROXIDE BLEACHING TO THE KIER

BEFORE: 13 operations; 24 hours; damage, seconds; unevenness.

NOW: 3 operations; 8 hours; perfect results.

THE grey cotton is run into the kier . . . It comes out perfectly bleached.

Any kier can be adapted, with little expense, for the R & H system of Peroxide bleaching, which equalizes cost of old and new methods. Ask us!

Makers of
ALBONE
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The ROESSLER & HASSLACHER CHEMICAL CO.
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tically unchanged. The activity of the three classes of looms was on the average unchanged for the month.

◆Carpet Wool Prices in U. S. Are Low

PHILADELPHIA.

CARPET wool prices are nominal, there being insufficient business passing to establish a market price level. Carpet looms are operating at a rate lower than at any time since 1921. Prices of these wools are lower in the United States than in world markets. East India auctions that were held early this month in Liverpool resulted in purchase of 375 bales for American firms.

Total of 15,500 bales were offered, 4,100 being withdrawn, and 8,000 bales were taken by British home market and 2,300 by continental buyers. Fact that new tariff rates on carpet wools are effective had an influence in amount taken by America according to trade. New rates levy 24c. duty, clean content, if in the grease, comparing with the old duty of 12c. per pound in the grease, a 6 to 8c. increase in duty.

Carpet wool imports the first four months of this year show a decrease of 24,000,000 lb., under 1929 within the same time. Although there is little encouraging in manufacturing situation the lowness of stocks of manufactured goods is expected to soon have a tendency to expand loom activity for the fall and winter retail season. Increase in machine activity is waiting on stabilization of raw material prices, which recently have declined drastically.

Raw Silk Makes New Low

Upturn Dependent Upon American Buying

POST-HOLIDAY trading on the raw silk exchange was marked by the establishment of new all-time lows. During the height of the selling there seemed to be no confidence in the market and several future months dipped to $2.73. This figure represents a point 7c. below the previous record low established in 1893 and repeated again in 1914. These former low levels were reached only at the time of severe industrial depression or during an unexpected upheaval such as the World War.

Traders characterized present prices as economically unsound and much below true value. At the same time they added a word of caution as to the advisability of making commitments. Some unexpected turn of events may cause quotations to skyrocket, or again the market may drift even lower. In this latter connection, the figure of $2.50 is heard repeatedly. Many are inclined to scoff at this, but again there are others in the state of mind where they are willing to believe that anything is possible.

While the decline has been attributed to weakness in Japan, importers stressed the fact that recovery will depend on the state of American buying rather than on any conditions abroad. This point was also emphasized in the annual report to the National Raw Silk Exchange, submitted by Jerome Lewine, president. He said in part:

"The drastic decline is to be laid at the door of under-consumption rather than over-production. World production of raw silk for the current season is expected to show an 8% increase over the preceding season, which is the average increase for the five preceding silk years. At the same time, consumption, which had in previous years shown an increase commensurate with the increase in production failed during the current season to show an increase. The brakes were put upon consumption but the wheels of production kept turning with the result that the entire increase in production during 1929-1930 must be carried over into the coming season as an unabsorbed surplus."

The decline lost some of its momentum later in the week as reports from Yokahama showed advances there. Other advices intimated that Japanese are endeavoring to curtail cocoon crops with the hope of stabilizing the market. One rumor contained the proposal that unhatched eggs were to be destroyed, but this was regarded as too expensive.

◆Underwear Circles Are Encouraged

KNITTED underwear mills conclude their first half of 1930 with the general sentiment that "it might have been worse." Representatives of several foremost producers believe that their January-June business will be almost as good as in the same period of 1929. This is certainly not a typical picture of the trade, as many smaller mills found hard sledding during the past few months. However, the current week finds the industry considerably encouraged. Lightweights are moving steadily, and are doing their best to compensate for the poor start.

There is a good call for athletic shirts and shorts, all small orders for spot shipment, but they aggregate a fair total; rayons also have picked up and are moving at a good pace. The lightweight lines have a long way to go to equal last year's business, but mill men are still hopeful. Spirited buying of summer lines during the next four weeks would do much to bring these divisions to the healthy side of the ledger. Weather is a vital factor; moderately warm and clear weather throughout July is hoped for by the knitters, as a means of stimulating consumer demand.

Heavyweights continue backward, despite the improved position of lightweights. Mill men complain of indifference at the jobbing and retail ends, as regards covering for fall on winter lines. The chances of a rush of heavyweight buying in last August, bringing with it the usual overselling and delaying shipments, are growing in proportion as the weeks pass. Only a fair percentage of the wholesale and retail markets who normally buy in spring for fall delivery, have placed their orders so far.

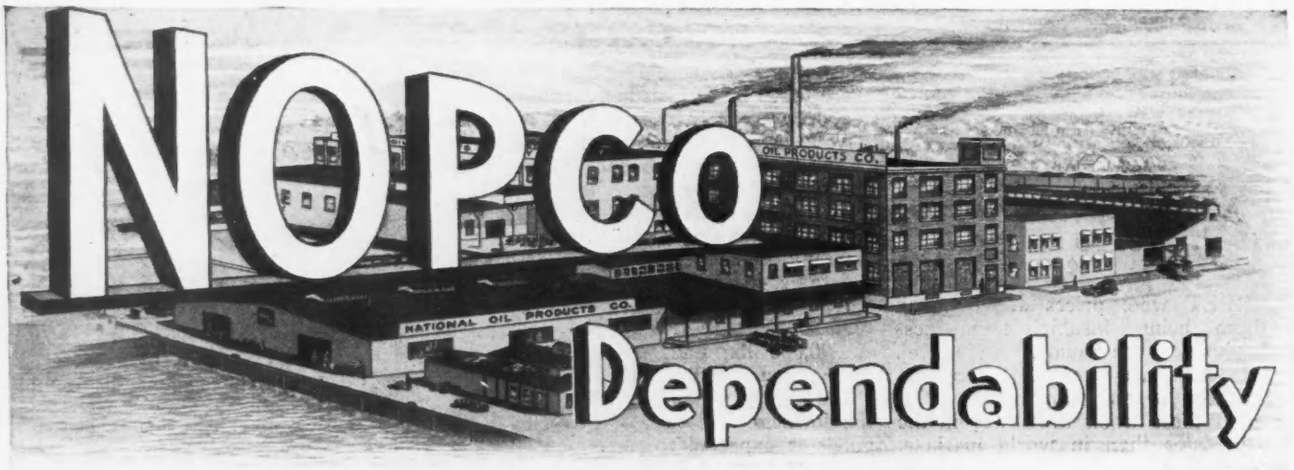
Brighter Hosiery Outlook

Orders Continue Scarce But Conditions More Promising

THE post-holiday week finds the hosiery market more optimistic, though demand has not registered any great pick-up. Jobbers and retailers practically suspended all activity at the buying end last week, due to Independence Day and the inventory period. Knitters this week regarded conditions as more promising than in some months. They find it easier to get quoted prices and though all orders are small, they are hopeful that conditions will improve steadily. This sentiment is based on the reaction at the retail end. Chain stores and individual store buyers are making many inquiries, and talk of an early return to normal commitments.

Retail stores are in a better position as regards hosiery; end-June sales cleared much of the stocks on hand, and indications are that this outlet will be placing business soon. The flood of "price" hosiery which kept the market soft during recent months has been pretty well assimilated, at least in the medium and higher-price ranges; low-priced hosiery is still in a difficult position, though some mills report an improved situation.

Grenadine yarn hose continues to make slow gains and producers believe this line will be a best-seller in fall. Retailers and jobbers show more interest in the $1.85s and $1.95s, thanks to



A Series of Advertisements on Reasons Why Rayon Manufacturers Should Use TEXTOYL 1556.

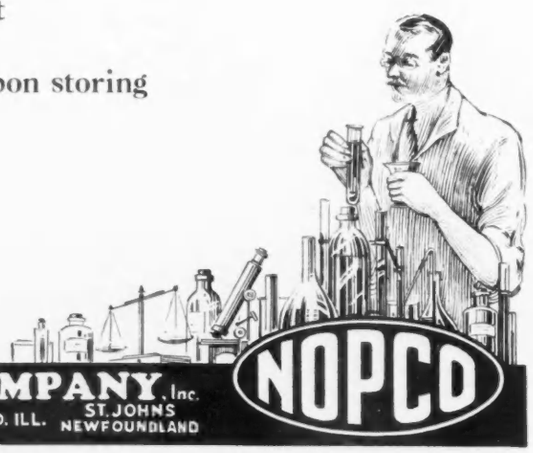
Reason No. 1—Practically Neutral in Reaction No More Rusty Rayon Needles

If you have had trouble with corrosion of needles and other machine parts from acid rayon oil, you will welcome an oil which is free from this objection. TEXTOYL 1556 lubricates and protects but does not corrode metal parts. Further, you can store rayon treated with this neutral rayon oil as long as you like before scouring, without danger of weakening the yarn.

TEXTOYL 1556 is not a sulphonated oil as are most oils used as rayon lubricants. It involves an entirely new principle, the basic patent for the process being the property of the National Oil Products Company. It is practically neutral in reaction, showing only .15 of 1% free fatty acid. Metal parts immersed for twelve days have shown no corrosion.

Other Advantages of TEXTOYL 1556

It is resistant to rancidity
It is resistant to oxidation
It has low viscosity
It has low moisture content
It is highly emulsifiable
It does not yellow rayon upon storing



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NATIONAL OIL PRODUCTS COMPANY, Inc.
EXECUTIVE OFFICES AND FACTORY **HARRISON, N. J.** BOSTON, MASS. CHICAGO, ILL. ST. JOHNS NEWFOUNDLAND

NOPCO

increased call from the consumers. The style importance of the grenadines will be a big element in overcoming the obstacle of the higher price, it is believed. Knitters who discussed that point this week said they were convinced that, once the fashion correctness of grenadine hosiery is established, women would buy the $1.85s and $1.95s, even if they had to economize in other ways to do it.

The degree of competition existing between the trams at $1.10 and $1.15 and the grenadines is a debatable issue. Certain knitters producing both lines said the trams would become definitely a "price" proposition as usual with good prospects at the volume end, and would not immediately compete with the twisted yarn numbers, although it was conceded that eventually any big gain scored by the grenadines might adversely affect the lower-priced stockings.

◆Bathing-Suits Easier After Holiday

BATHING-SUIT demand continued through the post-holiday week, but at an easier pace. A number of smaller mills that had been producing for stock found themselves loaded with merchandise just before the holiday week-end and they offered their goods at a considerable reduction. The total output affected was small compared with the market as a whole, and prices generally did not weaken. The larger mills report a healthy situation, with enough spot orders coming in to keep them delivering for weeks to come.

Rayon polo shirts are still a leader, but the attention of the knitters is turning to the fall polo lines. There is a moderate future call for the worsted long-sleeved shirts for August-September delivery. Mill men are hopeful that the polo vogue will carry into the fall, but it is too early to gage the prospects at that end. Fancy medium-weight sweaters have improved, though they are still backward. Heavyweight commitments for fall are better; considerable future business has been placed during the last ten days on heavyweight pullovers and coat sweaters.

◆Tropical Openings May Be Delayed

TROPICAL openings, originally expected during the week of July 7, are not likely to be shown to the trade until the middle of the month. Several important lines are incomplete because of the necessity for last minute style changes, but a more important reason for the delay is probably the desire of offering the very latest styles when the market is most ready to buy. In instances, quotations have been made and some goods have been sold, but there is no rush on the part of buyers to cover summer clothing wants just yet.

Prices are still an unknown quantity, but preliminary rumors seem to indicate a 10% decline from last year. A few lines have been quoted "at value." Plain weaves and solid colors are reported to be important in all lines.

The prospects for woolens are considerably brighter than for the last two years. The increased use of active and spectator sports clothing has caused several clothiers to specialize on these types of garments, and woolens find their natural niche in this field. Also, several houses have wished to avoid the keen competition that exists among producers of popular priced worsteds and have turned to shetlands, tweeds, and homespuns.

Greater Broadsilk Confidence

Reports of Sustained Call for All-Rayon Numbers

BROADSILK buying for fall still lags behind normal, but cutters have shown a slightly greater degree of activity during recent days. This interest has not shaped up in a definite way as yet, but dress manufacturers have been taking on sample pieces in order to style fall lines.

Certain producers tell of a well sustained activity in all-rayon numbers. Rayon jacquards, rayon jacquard prints and rayon prints in fall motifs are enjoying a good call. Tweeds and small all-over patterns are prominent. Small figures printed on jacquards and petit-point effects are highlighted. The important ground colors consist of brown, copper, green, and wine tones with the ever present staples of navy and black.

Canton crepes and failles are important in the plain goods. It was stated that the retailers have been purchasing good sized quantities of crepe satins and flat crepes.

Stocks generally are light and a few mills reported that they were unable to give closer than fours weeks delivery on novelties. Production is moderate and there is little chance that it will be increased until fall buying really starts.

Summer goods have been well cleaned out and present stocks are not subjected to an undue pressure to sell at a price. The retail trade continues to buy fair sized filling-in quantities of chiffons and georgettes.

Velvets have not developed into a large item as yet. These fabrics are most important in the negligee and lingerie trades with a few dress houses sampling. No retail buying has appeared in the market.

Post-Holiday Cottons Quiet

Denims for Next Quarter On 12½c. Basis for 2.20s.

COTTON textile markets generally were recovering from the effects of the holiday and sellers were resigned to the possibilities of a quiet week.

Staple gray goods turned inactive once more although prices remained firm at unchanged levels. Early in the current week, raw cotton declined somewhat and provided a bearish point for those resisting the higher prices of print cloths. Sellers contended that present figures on most constructions already discounted 10c.-cotton.

Figures of June activity were disappointing as many expected an improvement. Production established a new low rate, but even this did not wholly check the downward tendency. The increase in stocks was not entirely unexpected as most of the recent buying has been for July, August, September. The decline of 20% in unfilled orders and the 65.5% ratio of sales to production are positive indications that continued control over output is necessary.

Pre-holiday buying was confined almost wholly to print cloths, although there was a slightly better tone in the broadcloth demand. Sheetings and drills show little change either in price or inquiry. It must be borne in mind, however, that these cloths did not swing so low on a comparative price basis as did the 64x60, 5.35 yd. print cloths.

The call for finished goods continues to be poor with the possible exception of the 80-square percales. The season has practically drawn to a close on these goods, but there remains a moderate-sized quantity of day-to-day business. This is mainly responsible for the better position of the 80-square gray goods compared with other print cloths.

Rather unexpectedly, the Cone Export & Commission Co. named denim prices on Thursday. The new basis is 12½c. for the 28 in. 2.20, a figure considerable below expectations. This price is believed to be lower than any of the recent insides given on substandard makes. Denims have not been on so low a basis since July, 1921.

QUOTATIONS

at close of business, July 9, 1930
Prices cover average qualities unless otherwise stated

Cotton Goods

	July 9	June 25	July 10 1929
PRINT CLOTHS			
27 -in., 64x60, 7.60	4–4¼c.	4c.	4⅞–5c.
38½-in., 64x60, 5.35	5⅛–5½c.	5½c.	7¼–7⅞c.
39 -in., 68x72, 4.75	6½c.	6½–6¼c.	8½c.
39 -in., 72x76, 4.25	7½c.	7½–7⅞c.	9½c.
39 -in., 80x80, 4.00	7⅞–8c.	7⅞–8 c.	10c.
BROWN SHEETING			
36-in., 56x60, 4.00	7 c.	7 –7⅛c.	8½c.
36-in., 48x48, 3.00	8½–8⅝c.	8⅝–8⅝c.	10 c.
37-in., 48x48, 4.00	6¾–6⅞c.	6¾–6¾c.	7½– 7⅞c.
PAJAMA CHECKS			
36½-in., 72x80, 4.70	6¾–6⅞c.	6½–6⅞c.	8⅝–8¾c.
36½-in., 64x60, 5.75	5¼–5⅜c.	5¼–5⅜c.	7 c.
MISCELLANEOUS			
Drills, 37-in., 3 yd.	8½c.	8½c.	10½–10⅝c.
Denims, 2.20	12½c.	15c.	17c.
Tickings, 8 oz.	18–19½c.	18–19½c.	22–23½c.
Standard prints	8 c.	8 c.	9 c.
Eastern staple ginghams, 27-in.	10c.	10c.	10½c.

Cotton Waste

Peeler comber	11½—12
Peeler strips	10½—11
Sak. comber	10½—11
Choice willowed fly	5 — 6
Choice willowed picker	4 — 5
Sak. strips	13 —14
Linters (mill run)	3 — 3½
White spooler (single)	8½— 9

Cotton Yarn

(Carded yarn quotations are nominal)

CARDED (Average Quality)

Double carded 2c.-4c. higher, according to quality

SINGLE SKEINS OR TUBES (Warp Twist)

4s to 8s	$0.22½– 23	20s	$0.25
10s	.23 – .23½	24s	.27
12s	.23½– .24	26s	.28 – .29
14s	.24 – .24½	30s	.29½– .30
16s	– .24½	40s ex. qual.	.43 – .44

TWO-PLY SKEINS AND TUBES

8s-2	$0.23	26s-2	$0.28½– .29
10s-2	– .23½	30s-2	– .30
12s-2	– .24	36s-2	.36 – .37
14s-2	– .24½	40s-2	.38 – .38½
16s-2	– .25	40s-2 hi b k	.41 – .43
20s-2	.25 – .25½	50s-2	– .47
24s-2	– .27½	60s-2	– .55

SINGLE WARP

10s	$0.23	24s	$0.27
12s	– .23½	26s	– .28
14s	.23½– .24	30s	.30½– .31
16s	.24 – .24½	40s ex. qual.	.44 – .45
20s	.25 – .25½		

TWO-PLY WARPS

8s-2	$0.23 – .23½	24s-2	$0.28 – .28½
10s-2	.23½– .24	26s-2	.29 – .29½
12s-2	.24 – .24½	30s-2	.30½– .31
14s-2	.24½– .25	40s-2 ordin.	.38 – .39
16s-2	.25 – .25½	50s-2	.47 – .48
20s-2	– .25½	60s-2	.55 – .56

8s-3 and 4-ply skeins and tubes; tinged, 20-21; white, 23-23½; waste 19-20

HOSIERY CONES (Frame Spun)

8s	$0.23	22s	$0.26½– .27
10s	.23 – .23½	24s	.27½– .28
12s	.23½– .24	26s	.28½– .29
14s	.24 – .24½	30s tying	– .30½
16s	.24½– .25	30s reg.	.31½– .32
18s	.25 – .25½	30s ex. qual.	.34 – .34½
20s	.25½– .26	40s	.38 – .39

COMBED PEELER—(Average Quality)

TWO-PLY—(Knitting Twist) Cones

20s-2	$0.40 – .41	60s-2	$0.59 – .60
30s-2	.44 – .45	70s-2	.69 – .70
36s-2	.45 – .46	80s-2	– .81
40s-2	.46 – .47	90s-2	1.02 –1.05
50s-2	.52 – .53	100s-2	1.20 –1.25

WARPS, SKEINS AND CONES

TWO-PLY—(Warp Twist)

20s-2	$0.41 – .42	60s-2	$0.60 – .61
30s-2	.45 – .46	70s-2	.70 – .71
36s-2	.46 – .47	80s-2	– .82
40s-2	.47 – .48	90s-2	1.04 –1.07
50s-2	.53 – .54	100s-2	1.22 –1.25

SINGLES

12s	$0.34½	30s	$0.44
14s	– .35	38s	.46 – .47
16s	– .35½	40s	.47½– .48
18s	– .36	50s	– .52
20s	– .37	60s	– .60
24s	– .39½	70s	– .70
28s	– .42½	80s	.81 – .82

MERCERIZED CONES—(Combed, Ungassed)

26s-2	$0.55 – .56	90s-2	$1.35 –1.37
30s-2	.57 – .58	100s-2	1.65 –1.67
36s-2	.60 – .61	120s-2	2.05 –2.08
40s-2	.63 – .64	30s	– .75
45s-2	.65 – .67	40s	– .80
50s-2	.67 – .69	50s	– .85
60s-2	.76 – .78	60s	– .90
70s-2	.88 – .90	70s	–1.05
80s-2	1.00 –1.05	80s	–1.25

Cotton Prices and Statistics

COTTON STATISTICAL DATA

(Fluctuations of Futures)

	Closed July 2	For Week High	For Week Low	Closed July 9	Net Change
July	13.52	13.52	12.85	13.11	—.41
August	13.40	13.40	13.00	13.05	—.35
September	13.30	13.30	13.00	13.00	—.30
October	13.39	13.39	12.56	13.05	—.34
November	13.46	13.46	13.10	13.10	—.36
December	13.54	13.54	12.95	13.16	—.38
January	13.56	13.56	12.99	13.21	—.34
February	13.42	13.42	13.06	13.06	—.36
March	13.54	13.54	13.00	13.17	—.37
April	13.61	13.61	13.26	13.26	—.35
May	13.72	13.72	13.19	13.35	—.37

SPOT FLUCTUATIONS FOR WEEK

(Middling)

	New York	New Orleans	Liverpool
Friday, July 4		Holiday	7.63
Saturday, July 5		Holiday	7.64
Monday, July 7	13.30	12.50	7.66
Tuesday, July 8	13.15	12.40	7.57
Wednesday, July 9	13.20	12.40	7.57
Thursday, July 10	13.30	12.65	7.60

SPOT FLUCTUATIONS AND STOCKS

Markets	July 1	July 9	Sales	Stocks This Week	Stocks Last Year
Galveston	13.05	12.70	809	194,899	102,145
New Orleans	12.85	12.40	1,999	365,620	101,068
Mobile	12.50	12.25	.....	10,820	19,280
Savannah	12.63	12.21	.....	103,378	23,044
Norfolk	13.00	12.88	217	50,244	39,385
New York	13.65	13.20	.....	237,063	165,689
Augusta	12.75	12.56	431	51,594	37,497
Memphis	12.30	12.05	2,286	171,580	66,279
St. Louis	12.25	12.00	.....	7,881	11,788
Houston	12.85	12.40	1,595	567,473	210,111
Dallas	12.55	12.15	596	10,910	2,817

BASIS MIDDLING

	Saturday, July 5	Saturday, June 28
10 markets average	12.61	12.67
Memphis	12.25	12.35

PREMIUM STAPLES

First Sales from Factors Tables at Memphis

Grade Strict Middling	Prices Nominal
1⅛-in	14.90–15.25c.
1 3/16-in	16.25–16.50c.
1¼-in	21.15–21.40c.

CURRENT SALES

	For Week	Prev. Week	Week Before
Memphis total	2,002	1,888	1,448
F.o.b. included in total	1,202	1,615	1,123
10 markets	7,365	11,082	10,889

MEMPHIS RECEIPTS, SHIPMENTS, ETC.

	For Week	Last Year	Year Before
Net receipts	2,899	582	875
Gross receipts	6,455	2,183	3,287
Total since Aug. 1, net	941,087	859,415	664,635
Shipments	15,961	13,521	11,805
Total since Aug. 1	1,839,086	1,808,650	1,459,001
Total stock	180,288	73,045	105,631
Decrease for week	9,506	11,338	8,516

AVERAGE PRICE JULY-AUG. SHIPMENT HARD WESTERN COTTON

	F. o. b. New England Middling	St. Middling
1 1/16 in	15½–15½c.	15½–16 c.
1⅛ in	15½–16 c.	16½–16¾c.
1 3/16 in	17½–18 c.	18½–19 c.
1¼ in	22 –23 c.	23½–25 c.

Basis on New York, July, 13.11c.

DIFFERENCES ON AND OFF MIDDLING

WHITE GRADES

	Dallas	Memphis	Montgomery	Augusta	Average
M. F	1.05†	1.00†	1.00†	1.00†	1.00†
S. G. M	.90†	.85†	.90†	.88†	.86†
G. M	.75†	.75†	.75†	.75†	.72†
S. M	.50†	.50†	.50†	.50†	.50†
S. L. M	.75*	.65*	.65*	.75*	.71*
L. M	1.75*	1.75*	1.50*	2.00*	1.73*
S. G. O.**	3.00*	2.75*	2.50*	3.25*	2.88*
G. O	3.00*	2.75*	2.50*	3.25*	3.93*

YELLOW TINGED

G. M	.50*	.25*	.50*	.50*	.55*
S. M	1.00*	.75*	1.00*	1.00*	1.05*
M.**	1.75*	1.25*	1.50*	1.50*	1.65*
S. L. M	2.50*	1.75*	2.25*	2.25*	2.32*
L. M.**	3.50*	2.25*	3.00*	3.00*	3.22*

YELLOW STAINED

G. M	1.50*	1.75*	1.50*	1.50*	1.55*
S. M.**	2.25*	2.50*	2.50*	2.50*	2.40*
M.**	3.00*	3.00*	3.50*	3.50*	3.20

BLUE STAINED

M. G.**	1.75*	1.50*	1.75*	1.75*	1.70*
S. M.**	2.25*	2.25*	2.75*	2.75*	2.45*
M.**	3.00*	2.75*	3.75*	3.75*	3.23*

**Grades not deliverable on contract. †On Middling *Off Middling.

EGYPTIAN COTTON

Alexandria Exchange, June 25		Change
July Sak	28.00	.....
August uppers	16.08	+0.53

JULY–AUGUST SHIPMENT c. i. f. BOSTON

(Tariff not included)	(Prices Nominal)
Fully good fair Sak	30.50
Fully good fair to good Uppers	18.50

(By Anderson, Clayton & Co.)

Wool

OHIO, PENNSYLVANIA AND WEST VIRGINIA
(IN GREASE)

Fine delne..	$0.30 –$0.31	⅜ blood.....	$0.29 –$0.30
Fine clthg..	.23 – .24	¼ blood.....	.29 – .30
⅛ blood.....	.29 – .30		

TEXAS AND CALIFORNIA
(CLEAN BASIS)

Texas, 12 months	$0.73 –$0.75
California, Northern	.65 – .68

PULLED—EASTERN (CLEAN BASIS)

A-A.....	$0.75 –$0.78	B-Super...	$0.57 –$0.60
A-Super....	.63 – .68	C-Super...	.53 – .55

MONTANA, IDAHO AND WYOMING
(CLEAN BASIS)

Staple fine	$0.75 –$0.78
Staple ½ bld.	.70 – .73
Fine and fine medium	.70 – .72
¾ blood	.60 – .63
¼ blood	.55 – .58

MOHAIR—DOMESTIC

Best Carding	$0.38 –$0.40
Best combing	.53 – .55

MOHAIR FOREIGN (IN BOND)

Turkey fair, average	$0.28 –$0.30
Cape firsts	.28 – .30

FOREIGN CLOTHING AND COMBING
(CLEAN BASIS IN BOND)

Australia:	
70s	$0.65 –$0.70
64s	.53 – .55
58s-60s	.46 – .48

(IN GREASE)

Montevideo:	
58-60s	$0.25 –$0.26
56s	.25 – .26
50s	.23 – .24
Buenos Aires:	
4s, 40-44s	$0.22 –$0.23
5s, 36-40s	.20 – .21

FOREIGN CARPET (GREASE BASIS IN BOND)

Aleppo	$0.30 –$0.31
China: Combing No. 1	.17 – .19
China Filling Fleece	.16 – .17
Szechuen ass't.	.17 – .18
Cordova	.17 – .18
Scotch black face	.20 – .21
East India: Kandahar	.26 – .27
Vican'r	.28 – .30
Joria	.29 – .31

Worsted Yarns

ENGLISH SYSTEM WEAVING

2-20s, 36s	$0.92½–$0.95
2-24s, 40s	1.02½– 1.05
2-26s, 44s	1.10 – 1.12½
2-28s, 46s	1.15 – 1.17½
2-30s, 48s	1.20 – 1.22½
2-32s, 50s	1.25 – 1.27½

(Single yarns 5c. less than above)

2-36s, 58s	$1.35 –$1.40
2-40s, 60s	1.47½– 1.50
2-44s, 64s	1.55 – 1.57½
2-50s, 66s	1.72½– 1.75
2-60s, 70s	2.15 – 2.20

ENGLISH SYSTEM KNITTING

2-20s, 44s in oil	$0.95
2-20s, 50s in oil	$1.05 – 1.07½
2-20s, 56s in oil	1.15 – 1.17½
2-20s, 60s in oil	1.30 – 1.32½
2-20s, 64s in oil	1.40 – 1.42½
1-15s, 46s dyed	1.15 – 1.17½
1-15s, 48s dyed	1.17½– 1.20
1-15s, 50s dyed	1.20 – 1.22½

(Oil yarns 17½c. less)

FRENCH SYSTEM

1-20s, 58s	$1.22½–$1.25
1-20s, 60s	1.27½– 1.30
1-18s, 64s, Dyed	1.50 – 1.52½
1-26s, 64s	1.30 – 1.32½
1-30s, 60s, Warp	1.37½– 1.40
1-30s, 64s, Warp	1.42½– 1.45
2-30s, 64s, Fancy mixes	1.70 – 1.72½
2-40s, 64s, Zephyrs	1.60 – 1.65
1-50s, 66s	1.65 – 1.67½
2-50s, 66s	1.80 – 1.82½
1-60s, 70s	2.07½– 2.10
2-60s, 70s	2.25 – 2.30

FRENCH SPUN MERINO WHITE

1-30s, 50-50-58s on cops	$1.05 –$1.07½
1-40s, 50-50-60s on cops	1.20 – 1.25
1-40s, 50-50-64s on cops	1.22½– 1.25
1-40s, 50-50-64s Australian cops	1.30 – 1.35

Underwear mixes, 3c. additional.
Solid color, 35c. additional.

◆

Tops and Noils

TOPS—BOSTON

Fine (64-66s)	$0.97 –$0.99
Half-blood (60-62s)	.91 – .93
High ¾ blood (58s)	.83 – .85
Aver. ¾ blood (56s)	.80 – .83
Low ¾ blood	.78 – .80
High ½ blood (50s)	.73 – .75
46s S. A. and N. Z.	.65 – .70
44s S. A and N. Z.	.65 – .68
40s S. A and N. Z.	.63 – .65

TOPS—BRADFORD, ENG. (JULY 3)

Fine (70s)	31 d	¾ bld. (56s)	21½d
Fine (64s)	28 d	½ bld. (50s)	18d
¾ bld. (60s)	26 d	Cross-bred (46s)	15½d
¾ bld. low (58s)	23½d		

NOILS—BOSTON

Fine	$0.57–$0.60	High ¾ bld..	$0.44–$0.47
Half-bld.	.53– .55	Low noils...	.40– .42
Aver. ¾ bld..	.45– .48	Medium colored...	.40– .42
Fine colored	.46– .48		

Wool Substitutes

WOOL WASTE

Lap, fine white	$0.83 –$0.88
Lap, fine colored	.58 – .63
Hard ends, fine white	.63 – .68
Hard ends, ½ blood white	.45 – .48
Hard ends, fine colored	.30 – .33
Hard ends, medium colored	.23 – .28
Card, fine White	.35 – .38
Burr, fine Carbonizing	.38 – .43

OLD WOOLEN RAGS (GRADED FOR MFRS.)

Merinos, Coarse Light	$0.06½–$0.07
Merinos, Fine Dark	.04½– .05
Merinos, Fine Light	.14 – .15
Serges, Blue	.08½– .09
Serges, Black	.08 – .09
Serges, Red	.11 – .11½
Knit, White	.29 – .30
Knit, Red	.16 – .17
Knit, Light Hoods	.15 – .16
Worsted, Light	.05½– .06
Worsted, Blue	.08½– .09
Worsted, Black	.08 – .09

Silk Yarns

THROWN SILK (60 day basis)

Japan organzine, 2 thd. grand XX in skeins	$4.40
Japan organzine, 2 thd. sp. crack in skeins	4.25
Japan crepe, 3 thd. grand XX in bobbins	4.80
Japan crepe, 3 thd. sp. crack on bobbins	4.10
Japan crepe, 4 thd. crack on bobbins	3.85
Canton crepe, 3 & 4 thd. ns. 14/16 on bobbins	2.70
Tussah tram, 2 end on cops	2.00
Hosiery tram, 3 thd. Japan XXX	5.00
Hosiery tram, 4 thd. Japan, selec. gd. XX	4.50
Hosiery tram, sp. crack XX	3.75
Hosiery tram, crack XX	3.65
Hosiery tram, XX	3.40

SPUN SILK YARNS—(Terms: net 30)

40/2	$3.85	60/2	$4.20
50/2	4.05	62/1	3.00

Raw Silk

(60 day basis)
Prices Nominal

	Spot	New Season
Japan filature, grand XX, 13/15	$3.50	$3.30
Japan filature, sp. crack XX, 13/15	3.35	3.20
Japan filature, crack XX, 13/15	3.15	3.00
Japan filature, XX, 13/15	3.00	2.85
Japan filature, best X, 13/15	2.80	2.70
Canton filature, new style, 14/16	1.85	1.50
Canton filature, new style, 20/22	1.75	1.40
Tussah filature, 8 cocoon	1.35	1.00
Grand XX (Yellow) 20/22	3.20	2.80
Grand XX (White) 20/22	3.25	2.90
Sp. crack (Yellow) 20/22	3.10	2.75
Sp. crack (White) 20/22	3.20	2.80
Crack (Yellow) 20/22	3.10	2.60
Crack (White) 20/22	3.15	2.80

NATIONAL RAW SILK EXCHANGE

	Close July 1	For the Week High	For the Week Low	Close July 8	Net Chge.
July	2.90	2.90	2.78	2.78	—.12
August	2.85	2.86	2.75	2.75	—.10
September	2.85	2.89	2.75	2.74	—.11
October	2.85	2.90	2.75	2.74	—.11
November	2.83	2.89	2.73	2.73	—.10
December	2.84	2.90	2.73	2.73	—.11
January	2.85	2.90	2.73	2.73	—.12
February	2.85	2.88	2.73	2.73	—.12

July 1 to July 8—Total contracts, 500. Total number of bales, 5,000. Total approximate value, $1,778,750.

Domestic Rayon

VISCOSE PROCESS

Denier	Filament	First	Second
50	14	$2.30	$2.00
75	18	1.85	1.65
75	30	1.95	1.75
100	18	1.45	1.35
100	40	1.50	1.40
125	18	1.45	1.25
125	36	1.30	1.20
150	24	1.15	1.10
150	32	1.15	1.10
150	36	1.20	1.15
150	60	1.35	1.30
150	75	1.50	.....
170	24–27	1.15	1.10
170	60	1.35	1.30
200	30	1.05	1.00
200	32	1.10	1.05
200	60	1.30	1.25
300	44	.95	.90
400	72	1.10	.95
450	54	1.00	.95
600	72–96	1.00	.95
900	100–144	1.00	.95

NITRO-CELLULOSE PROCESS

Denier	First Qual.	Second Qual.	Denier	First Qual.	Second Qual.
35	$3.50	$3.25	125	$1.30	$1.20
50	2.25	1.90	140	1.15	1.10
75	1.85	1.65	150	1.15	1.10
100	1.45	1.35	160	1.15	1.10
			175	1.15	1.05

CUPRAMMONIUM PROCESS

Denier	Filament	Price	Denier	Filament	Price
15	25	$4.15	40	30	$3.15
25	25	3.65	52	30	3.00
30	25	3.40			

(Due to diversified offerings prices for higher denier are not listed.)

ACETATE PROCESS

Denier	Price	Denier	Price
45	$2.75	120	$1.90
55	2.55	150	1.60–1.85
75	2.25–2.70	200	1.55
100	2.00–2.45	300	1.50

Rayon Waste

Prices Nominal

Open bleached waste	–$0.18
Open unbleached waste	–.15
Bleached thread waste (mfs.)	– .12
Bleached thread waste (misc.)	.11– .12
Colored thread waste	.08– .10
Colored clips	–.07½

CONVERTED RAYON WASTE

Bleached tops	–$0.49
Unbleached tops	– .43
Bleached noils	– .18
Bleached garnets	– .18
Unbleached garnets	– .16
Colored garnets	– .14

Silk Waste

Kibizzo Kikai Grand XX	$0.85
Kibizzo Kikai Triple Extra	.92
Frison Grand Double	.90
Pierced Cocoons	1.12

Southern Mill Securities

(A. M. Law & Co., Spartanburg)

	Bid	Asked
Abbeville Cotton Mills	..	60
Anderson Cotton Mills	69	73
Arcade Cotton Mills	..	60
Arcadia Mills	..	240
Arcadia Mills, pfd	97	100
Arkwright Mills	..	80
Augusta Factory, Ga	..	20
Avondale Mills, Ala	..	1050
Beaumont Mfg. Co	250	300
Beaumont Mfg. Co. 7% pfd	100	102
Belton Mills	..	25
Belton Mills, pfd	..	80
Bibb Mfg. Co	104	110
Bibb Mfg. Co. 6% pfd	99	102
Brandon Corp., A	..	50
Brandon Corp., B	..	7
Brandon Corp., pfd	83	85
Calhoun Mills	88	95
Chadwick-Hoskins Co. (par, $25)	10	12
Cheanee Mills	..	65
Chiquola Mfg. Co	250	260
Chiquola Mfg. Co., pfd	88	92
Clifton Mfg. Co	97	100
Clinton Cotton Mills	235	250
Columbus Mfg. Co., Ga	80	90
Cowpens Mills	..	35
D. E. Converse Co	90	95
Dallas Mfg. Co., Ala	..	65
Darlington Mfg. Co	40	51
Drayton Mills	110	..
Dunean Mills	120	125
Dunean Mills, pfd	100	102
Eagle & Phenix Mills, Ga	..	65
Easley Cotton Mills, pfd	55	65
Enterprise Mfg. Co., Ga	..	100
Fairforest Finishing Co., serial notes	98	100
Florence Mills	43	50
Florence Mills, pfd	98	102
Gaffney Mfg. Co	..	32
Gainesville Cotton Mills, Ga	145	155
Glenwood Mills	95	100
Gluck Mills	70	75
Gossett Mills	60	65
Graniteville Mfg. Co	..	100
Greenwood Cotton Mills	400	..
Grendel Mills, pfd. (par, $50)	45	48
Hamrick Mills	..	100
Hartsville Cotton Mills	130	140
Hunter Mfg. & Com. Co., pfd	88	92
Industrial Cotton Mills Co., pfd	..	34
Inman Mills	115	125
Inman Mills, pfd	100	..
Judson Mills, A, pfd	103	106
Judson Mills, B, pfd	97	100
King, John P. Mfg. Co., Ga	80	90
Lancaster Cotton Mills	250	270
Laurens Cotton Mills	..	121
Limestone Cotton Mills	..	100
Lydia Cotton Mills, serial notes	99	101
Marion Mfg. Co., N. C	..	115
Marlboro Mills	..	15
Mills Mill, pfd	95	99
Mollohon Mfg. Co., pfd	97	102
Monarch Mills	112	118
Musgrove Cotton Mills	30	35
Newberry Cotton Mills	105	111
Ninety-Six Mills	400	..
Norris Cotton Mills	..	45
Orr Cotton Mills	..	60
Orr Cotton Mills, pfd	80	85
Pacolet Mfg. Co	..	145
Pacolet Mfg. Co., pfd	98	102
Panola Cotton Mills, Class A, pfd. (par, $60)	57	60
Pickens Cotton Mills	105	115
Piedmont Mfg. Co	96	100
Piedmont Print Works (no par)	15	20
Piedmont Print Works, pfd	60	70
Poe, F. W. Mfg. Co	24	29
Riverside & Dan River Mills	11⅓	12⅓
Riverside & Dan River Mills, 6% pfd	73	78
Saxon Mills	..	75
Sibley Mfg. Co., Ga	50	60
Southern Bleachery	17	20
Southern Bleachery, Pfd	83	88
Southern Bleachery, serial notes	98	100
Southern Franklin Process	22	24
Southern Franklin Process, pfd	98	101
Southern Worsted Corp., pfd	88	92
Spartan Mills	145	155
Spencer Corp., serial notes	98	100
Union-Buffalo Mills	..	50
Union-Buffalo Mills, 1st pfd	88	92
Union-Buffalo Mills, 2nd pfd	45	47
Victor-Monaghan Co	68	71
Victor-Monaghan Co., pfd	112	117
Wallace Mfg. Co	..	105
Ware Shoals Mfg. Co	130	140
Whitney Mfg. Co	..	40
Woodside Cotton Mills Co	..	50
Woodside Cotton Mills Co., pfd	42	45
Yarns Corp. of America, gold bonds	99	101

Textiles on N. Y. Exchanges

The following shows the movements of the leading textile stocks listed on the New York Stock Exchange and Curb for the week ended July 9:

	High	Low	Last Sale	Net Change
Adams Millis	27¼	26	27¼	— ⅛
*American Thread pfd	3½	3½	3½	.....
American Woolen	11⅜	11⅛	11⅛	— ⅛
American Woolen, pfd	30½	29	29	— 2⅛
*Assoc. Rayon, pfd	42½	42	42⅞	+ 4½
Belding-Hemingway	4	4	4	.....
Botany Mills, A	3	3	3	.....
Cannon Mills	23½	21⅛	23½	+ 2
Century Ribbon	5	4½	5	.....
Collins & Aikman	21¼	18⅜	19½	— 2⅛
Consolidated Textile	1	⅝	⅝	.....
*Courtaulds, Ltd	10½	10½	10½	— ½
Duplan Silk	14⅜	14⅜	14⅜	— ⅜
*Fabrics Finishing	4½	4	4	— ½
Gotham Hosiery	11	10	10½	— 1⅞
Industrial Rayon	90⅛	78½	90	+11½
Kayser, Julius	26½	24½	25½	— ½
Kendall, pfd	76⅜	76⅜	76⅜	— ⅛
Mallinson	13	10½	11⅜	+ 1⅜
Mohawk Carpet	18	17	18	+ ½
Munsingwear	45	45	45	.....
Pacific Mills	22½	20½	22½	+ ½
*Pepperell	88	86	86	.....
Real Silk Hosiery	38⅜	38⅛	39	— 1⅛
*Tubize Chat. B	8	7⅞	7⅞	— ⅛
United Piece Dye Wks	23	23	23	— 2⅜

*Listed on Curb.

N. Carolina Mill Stocks

(R. S. Dickson & Co., Charlotte, N. C.)

	Bid	Ask
Acme Spinning Co	68	76
American Yarn and Processing Co	..	81
Chadwick-Hoskins Co. (Par. $25)	8	11
Chadwick-Hoskins Co., 8%, Pfd	98	101
China Grove Cotton Mills	100	107
Climax Spinning Co	60	68
Clover Mills	..	25
Converse D. E. Co	90	95
Crescent Spinning Co	55	62
Dixon Mills	90	100
Durham Hosiery, 6%, Pfd	42	50
Eagle Yarn Mills	60	70
Efird Mfg. Co	75	84
Erwin Cotton Mills	..	120
Erwin Cotton Mills Co., 6%, Pfd	90	97
Flint Mfg. Co	..	82
Flint Mfg. Co., 7%, Pfd	..	99
Globe Yarn Mills (N.C.)	..	20
Gray Mfg. Co	..	81
Hanes, P. H. Knitting Co	8	10½
Hanes, P. H. Knitting Co., 7%, Pfd.	96	101
Henrietta Mills, 7%, Pfd	44	55
Imperial Yarn Mills	..	60
Linford Mills	64	75
Locke Cotton Mills Co	..	73
Majestic Mfg. Co	115	135
Mansfield Mills	64	82
Mooresville Cotton Mills	6	8
Mooresville Cotton Mills, 7%, Prior Pfd	..	88
Myers Mills	..	74
Myrtle Mills	..	51
National Yarn Mill	52	61
Perfection Spinning Co	59	70
Ranlo Mfg. Co	..	115
Ranlo Mfg. Co., 7%, Pfd	..	100
Roanoke Mills	64	..
Roanoke Mills, 1st Pfd., 7½%	91	96
Roanoke Mills, 2nd Pfd., 8%	91	97
Rosemary Mfg. Co., Pfd., 7½%	98	..
Rowan Cotton Mills Co	70	80
Seminole Cotton Mills Co	..	76
Sterling Spinning Co	60	78
Stowe Spinning Co	60	71
Victory Yarn Mills Co	39	50
Ware Shoals Mfg. Co., 7%, Pfd	98	101
Winget Yarn Mills Co	40	50
Wiscassett Mills Co	175	185

New England Textile Stocks

Quotations at "Public Sale" are based on last sales at Boston Public Auctions and Boston Stock Exchange. Bid and Asked prices are latest quotations of leading Boston dealers.

	Public Sale	Bid	Asked
Am. Mfg. pfd	68	58	65
Amoskeag	12⅜	...	...
Arlington	23½	22	24
Associated Textile	36½	34	37
Bates	63	76	83
Berkshire Associates, com	15	14	16
Berkshire Associates, pfd	69	67	71
Bigelow-Sanford, com	55½	...	...
Boott Mills	120½	110	115
Edwards	80½	79	81
Esmond, pfd	102	100	102
Farr Alpaca	68	65	70
Hamilton Woolen	40	38	41
Hill	18	18	23
Indian Orchard	20½	20	25
Ludlow	138	136	138
Merrimack, com	50½	45	50
Nashua, com	32½	27	31
Nashua, pfd	77½	70	..
Naumkeag	88	86	88
Newmarket	25¾	23	27
Otis	49½	44	47
Pacific	22	...	...
Pepperell	85½	85	88
Plymouth Cordage	82	74	78
York	8⅜	8	10

New Bedford Mill Stocks

(Sanford & Kelley, New Bedford)

	Bid	Asked
Acushnet Mill	14	16
Beacon Mfg., con	125	..
Beacon Mfg., pfd	85	87
Booth Mfg. Co., com	9	11
Booth Mfg. Co., pfd	30	..
Bristol Mfg. Co	28	30
City Mfg. Co	24	27
Dartmouth Mfg. Co., com	50	..
Dartmouth Mfg. Co., pfd	86	..
Fairhaven Mills, pfd	⅛	⅜
Gosnold Mill., com	18	..
Gosnold Mill, pfd	59	62
Grinnell Mfg. Co	25	27½
Hathaway Mfg. Co	38	40
Holmes Mfg. Co., com	1	3
Holmes Mfg. Co., pfd	10	..
Kilburn Mill	36	39
Nashawena Mills	19	20½
N.B. Cotton Mills, pfd	12	18
Neild Mill	40	45
Nonquitt Mills	5	6
Pierce Mill	120	125
Potumska Mills	30	32½
Quissett Mills, com	50	53
Soule Mill	55	57
Taber Mill	13½	14½
Wamsutta Mills	13½	15
Whitman Mills	..	3½
Gosnold Mill Notes	87	..
Whitman Mills 6% Notes	40	..

* Ex-dividend.

Textile Calendar

National Association of Waste Material Dealers, Organization Meeting of Wiping Cloth Division, Congress Hotel, Chicago, July 14-15, 1930.

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National Knitted Outerwear Association, Western District, Golf Tournament at Butte Des Morts Country Club, Appleton, Wis., July 15, 1930.

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Worsted Yarn Spinners' Annual Outing, Manufacturers' Country Club, Oreland, Pa., Sept. 24, 1930.

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National Safety Congress, Textile Section, Annual Meeting, William Penn Hotel, Pittsburgh, Pa., Sept. 30-Oct. 1, 1930.

National Association of Cotton Manufacturers, Annual Meeting, Poland Springe, Me., early in October (exact date not available).

•

Ninth Southern Textile Exposition, Textile Hall, Greenville, S. C., Oct. 20-25, 1930.

•

Textile Division, A.S.M.E., National Meeting, Poinsett Hotel, Greenville, S. C., Oct. 22, 1930.

•

Southern Textile Association, Semi-Annual Meeting, Poinsett Hotel, Greenville, S. C., Oct. 23, 1930.

Confer Again in Boston on Subject of Wool Tops Futures Market

BOSTON.

THE second informal conference to consider the possibility of instituting a futures market in wool tops was held in the Chamber of Commerce building, Boston, Mass., Thursday, July 10. The movement is being sponsored by the New York Cotton Exchange in the belief that a futures market in tops is essential in order to place the business of wool merchandising on a modern basis. The calling of the second conference reflected the desire of the wool industry as a whole to know more about the project, the essential feature of which, according to its promoters, is insurance for handlers of raw, semi-manufactured and fully manufactured materials against fluctuations in prices which in recent years have operated to the extreme disadvantage of the wool trade as a whole.

PROJECT IN BRIEF

In discussion following the luncheon it was pointed out that while a futures market in tops might constitute only a very limited source of supply to actual consumers of the semi-manufactured product it would, however, provide an immense speculative organization for hedging purposes on the part of wool merchants, and yarn and cloth manufacturers, performing similar functions for the wool industry to that of the cotton futures market for the cotton industry. Actual deliveries of tops would be relatively negligible as compared with the number of transactions carried on chiefly for hedging purposes.

The matter of an arbitration board, a hang-over from the previous meeting, was given fuller explanation. The functions of the arbitration board would be to supervise the technical end of the business, compare tops for eventual delivery and establish, in relation to the standard, the percentage of appreciation or depreciation. As the expression "arbitration board" covers an entirely different meaning for the wool trade, it seems likely that the expression "certification bureau" would be substituted as this describes more accurately the functions of this division of the institution.

PERSONNEL OF CONFERENCE

The New York Cotton Exchange sent over its president, Philip B. Weld, and other representatives were Clayton Rich, John J. Pflieger, chairman of the special wool committee of the exchange, Julius Baer, and Eugene Schwerdt, a Boston wool importer, who is particularly conversant with a wool top futures market, understood to be the "father" of the Antwerp futures market. Philadelphia Wool & Textile Association representatives were Herbert Webb of Charles Webb & Sons, Edwin Dearnley of Dearnley Bros., and Clarence Doane of Doane & Co. Representatives from the National Wool Marketing Corp. were Paul A. Draper and L. U. Edgehill. Representing the National Association of Wool Manufacturers were Franklin W. Hobbs, president, Arlington Mills; Moses Pendleton, American Woolen Co.; Harold S. Edwards, Barre Wool Combing Co. and Max W. Stoehr, of the Botany Consolidated Mills. The Boston Wool Trade Association was represented by its president, William G. Fallon, and in addition, Albert W. Elliott, Sidney A. Eisemann, Claude H. Ketchum, and Robert L. Turnbull.

Tie Silk Producers Consider Current Problems

Current conditions in the manufacture and distribution of tie silks were discussed from several different angles at the meeting of over 30 representatives of manufacturing and sales factors held under the auspices of the Silk Association of America. The following executive committee was elected at the meeting: J. Gold, S. J. Aronsohn, Inc.; Legrand Gould, Susquehanna Silk Mills; C. A. Haus, Empire Silk Co.; F. Headon, C. K. Eagle & Co., Inc.; Otto A. Haenichen, Haenichen Bros. Silk Co.; Leo Herz, B. Edmund David, Inc.; Otto H. Heumann, The Schwarzenbach Huber Co.; K. A. Meyer, Audiger & Meyer; Robert J. Wright, John Hand & Sons, Inc.

B. Edmund David, B. Edmund David, Inc., acted as chairman at the organization meeting, but a permanent chairman will be elected at the first meeting of the executive committee in the near future.

Among the subjects discussed was that of the enforcement of contracts, with emphasis on the importance of maintaining stabilized conditions by upholding the original conditions of all contracts.

New Members of Cotton Textile Institute

Seventy-one cotton mills with 2,835,043 spindles have joined The Cotton-Textile Institute since its last annual meeting, according to an announcement by the Institute. The Mary Leila Cotton Mills, Greensboro, Ga., Margaret Mill, Huntsville, Ala., Volunteer Knitting Mills, Athens, Ala., and the Appalachian Mills Co., Knoxville, Tenn., are the latest additions to the Institute membership.

Start Work on Addition to House Southern Textile Show

GREENVILLE, S. C.—Ground was broken this week by Fiske-Carter Construction Co. for a temporary annex for the ninth Southern Textile Exposition to meet the demand for space. The new building will be of heavy mill construction 130 x 40 ft. It will be connected with the ground floor of Textile Hall and the steel annex so that the exposition will appear to be housed practically in one building.

The transformer station in the rear of the building has been rebuilt. Additional heavy duty switches are being installed, and a wire fence built around these high tension terminals. A great deal of concrete work has been finished, providing for complete drainage for surface water.

Everything possible for the comfort and convience of exhibitors is being arranged under the personal direction of the president and secretary. The management states that exhibitors who desire to install heavy machinery may begin work a month before the exposition opens without additional charges for space.

Western District Outerwear Men Hold Outing

MILWAUKEE, WIS.—Members of the Western District, National Knitted Outerwear Association, will meet on the afternoon of July 15 for a golf tournament at the Butte Des Morts Country Club, at Appleton.

The get-together will open at Appleton with the golf match and following this the members will drive to Neenah, Wis., where they will dine at the Valley Inn hotel. The Jersild Knitting Co. of Neenah will act as host to the members.

J. H. Wheelock & Co. to Represent Francis Willey of Bradford

Francis Willey & Co., Inc., wool merchants and topmakers of 300 Summer Street, Boston, Mass., announce that as of June 30 they ceased to represent Francis Willey & Co., Ltd. of Bradford, Eng., giving up the general merchandising of wool in order to devote their organization entirely to the business of topmaking. As of that date Joseph H. Wheelock & Co. of 274 Summer Street, Boston, Mass., became the sole representative in the United States of Francis Willey & Co., Ltd. of Bradford, Eng.

B. G. Holt Joins Merchandise & Research Bureau

B. G. Holt, who has resigned as vice-president and director of the Associated Dry Goods Corp., of New York, effective July 31, has joined Charles A. Cook as vice-president and general manager of the Merchandise & Research Bureau, Inc., which has a clientele of 70 of the larger department stores throughout the United States, doing a business of more than $300,000,000 annually.

Leipzig Fair Starts Aug. 31

Manufacturers from 25 nations will display their lines at the Leipzig Fair, to be held Aug. 31 to Sept. 5, at Leipzig, Germany, it is announced by the Leipzig Trade Fair, Inc., of New York City. The executives in charge of plans expect that 180,000 buyers from 72 countries, including 3,000 from America, will attend the event.

Silk Association Issues Raw Silk Figures

Figures released by the Silk Association of America, Inc., show a notable decline in the amount of silk held in storage at the end of June compared with the previous month. Japan silk in transit picked up considerably, in fact amounted to slightly more than April and May figures together, although only 50% of the 1929 monthly average. June statistics of imports, bales in storage, and deliveries to American mills are lower than any other month shown in the record which goes back as far as January, 1928. Detailed data follows:

	Imports Received During the Month*		Approximate Deliveries to American Mills†	
	1930	1929	1930	1929
January	43,175	58,384	57,683	57,349
February	42,234	43,278	49,852	46,228
March	39,990	48,103	50,863	49,878
April	37,515	47,762	41,584	53,855
May	22,596	49,894	40,823	49,121
June	22,369	54,031	29,396	46,504
July	.....	46,795	.....	51,624
August	.....	65,516	.....	59,704
September	.....	59,970	.....	53,274
October	.....	66,514	.....	57,489
November	.....	62,885	.....	50,562
December	.....	58,479	.....	44,159
Total	207,879	661,611	270,201	619,747
Monthly aver.	.....	55,134	.....	51,646
6 months aver.	34,647	50,242	45,034	50,489

*Imports at New York during current month and at Pacific ports previous to the time allowed in transit across the Continent (covered by Manifest 126 to 151 inclusive). †Includes re-exports.

Brown Durrell Announce Hosiery Price Cuts

Brown Durrell Co. announced price reductions on many hosiery numbers late last week. It was said that lower prices are made possible by operating economies and declines in raw material. It was stated at the same time that a new "Gordon Chiffoam" number will be introduced for August delivery.

The new quotations, which are stated to be the lowest in several years for this make are as follows: Nos. 320, 420, 789, and 889 are $10.50 per doz. The first two numbers were $11.50 and the latter two were $12.50. Nos. 550, 575, 600, 815, 819, and 725 are now $12.50 compared with the former price of $15.50. Nos. H300 and 675 are $15 compared with $15.50 and $19 respectively. Nos. 700 and 900, ingrains are unchanged at $19 and $22.50 respectively.

Cutters Want Only 39-In. Width in Crepes

Only 39-in. widths are desired by the garment industry in plain or printed crepes, according to interviews with over 50 cutters-up in a survey conducted by the Silk Association of America.

The garment manufacturers represented a range of price groups from $6.75 to $59.50, and it is believed include a comprehensive picture of the trade.

The results of this inquiry made at the recommendation of the executive committee of the broad silk division will, it is thought, be an assurance to the silk trade as to what they shall do for the coming season. Discussion has been rife in the silk industry for the last few weeks as to whether the demand for 42-in. chiffons would extend to the crepe groups. The results of the association's canvas indicate that this is not so.

R. E. Henry Heads Aragon-Baldwin Cotton Mills

CHESTER, S. C.—At the meeting of the board of directors of the Aragon Baldwin Cotton Mills, Inc., at the executive offices here on July 9, the resignation of David Jennings, president, which was tendered recently, was accepted with regret. R. E. Henry, vice-president, was elected to succeed him, and R. G. Emery was elected vice-president.

Mr. Jennings recently resigned as a result of the additional duties assumed by him in connection with the new mill accounts recently acquired by J. P. Stevens & Co.

Moderate Decline at London Wool Auctions

The fourth series of London wool auctions opened Tuesday, resulting in a moderate decline in prices as compared with May closings, merinos and crossbreds showing a decline of 5 to 7½% with scoured and pulled wools off from 7½ to 10%. This moderate decline did little else than reflect the general easiness in prices seen in the foreign markets since the closing of the third London series in May. The Continent bought merinos and Bradford, crossbreds. The opening was about as expected and had no influence on the domestic wool market.

Industrial Rayon Relocates Southern and N. E. Offices

The headquarters of J. H. Mason, representative for Industrial Rayon Corp., in North Carolina and Virginia, have been moved to 1105 Greensboro Bank and Trust Building, Greensboro, N. C. The office at 1411 Independence Building, Charlotte, N. C. formerly occupied by Mr. Mason, will be continued by Bruce Griffin, district sales manager. The company's New England representative, H. R. Barker, has moved his offices to 38 Brock St., Fall River.

Nuera Rayon Co. Liquidates

MANCHESTER, ENG., July 9 (*Special cable*).—The Nuera Rayon Co. is going into liquidation due to shortage of finances. Company was formed in 1925. It subsequently purchased Lilienfeld patents and later extended rights to Courtauld's and Glanzstoff. The Nuera plant has been stopped for some time.

Aberfoyle Chicago Personnel

Aberfoyle Mfg. Co., Philadelphia, has announced the appointment of E. J. Neal as one of their sales representatives in the Chicago territory. Mr. Neal is well known in the trade, having formerly been connected with such concerns as Wm. Whitman Co., Johnston Mills and Cotton Products Co.

Commission Approves Rule for Labeling Wool Underwear

A rule of business conduct concerning the use of the word "wool" has been added to the code of ethics of the knit underwear industry, according to announcement by the Federal Trade Commission on July 5. The rule, effective Jan. 1, 1931, adopted at the second trade practice conference of the industry, held in Utica, N. Y., in May, follows:

"Resolved, That the word 'wool' shall not be used in any way in the labeling, advertising, merchandising or selling of knit underwear unless the percentage by weight of wool contained in the garment is stated.

"That garments with percentage of wool content named shall contain not less than the stated percentage of wool by weight, with the allowance of a flat tolerance of 3% plus or minus on any labeled percentage. For example, a garment identified as having a 50% wool content might range from 47 to 53% wool content by weight."

Limits Interest in Cotton Futures for Specified Months

In conformity with a provision of section 114 of the by-laws, the board of managers of the New York Cotton Exchange on July 8 unanimously adopted the following resolution:

"Resolved that the board of managers prescribe as the maximum limit of interest on future contracts for delivery in any one month by any member, firm or corporation, and his or its affiliations: 150,000 bales in July, 1930, August, 1930; 250,000 bales in September, 1930; 1,000,000 bales in October, 1930, and in all months up to and including June, 1931."

Nyanza Mills Introduce New Knitting Yarn

Nyanza Mills, Woonsocket, R. I., are introducing a new yarn for use in knitting men's undershirts. This is a 60s-1 Durene twisted with a 60s-1 Nyon. The latter is a spun rayon yarn made from staple fiber. In the final knitted product the combination of mercerized cotton and rayon is stated to impart a feeling of lightness and softness to the touch.

More Than 50 Years in Carpet Wool Trade

PHILADELPHIA.—Joseph S. Lord, carpet wool department, Chas. J. Webb & Sons, Inc., celebrated anniversary of his 54th year in the carpet wool business this week. Mr. Lord is undoubtedly the oldest member of the carpet wool trade in the United States in respect to years engaged in the business.

When Mr. Lord started his career in the wool trade carpet manufacturers were using Colorado wool for their raw material and 90% of the carpets were being made on hand looms. He has visited practically every country in the world that grows carpet wools, hav-

ing lived for several years in China taking part in the Boxer uprising. He has been a witness in every important carpet wool case that has been considered in United States courts for the last 15 years.

Pepperell Sells Water Power Rights

The Pepperell Mfg. Co., Biddleford, Me., recently sold water power rights to the Cumberland County Power & Light Co., but did not sell a cotton mill. This information was incorrectly given in previous issues of TEXTILE WORLD.

Business News

American Laundry Machinery Co. Takes Over General Laundry

The American Laundry Machinery Co., announces acquisition of assets, good will, trade name, and business of the General Laundry Machinery Corp., with the exception of the centrifugal division of this company, formerly conducted under the name of the Tolhurst Machine Works.

The General Laundry Machinery Corp.'s products include the "General" line of washers and tumblers and calender flat work ironers. The American Laundry Machinery Co., has also recently added to its line of machinery the Perry unloading washers and extractors, the specialized Schramm curtain and blanket equipment and the Adams-Monarch line, and has improved and is continuing these additional important lines of laundry machinery.

The General Laundry Machinery Corp. was incorporated in May, 1927, to take over two companies—the Tolhurst Machine Works and the Willey-Ellis Co.

According to authentic reports, net sales of the General corporation have showed a steady increase until they reached a figure well over $3,000,000.

It is the present plan of the American Laundry Machinery Co. to continue the manufacture of certain products of the General line at the factory in Chicago It is also understood that the American company has employed a number of the sales representatives of the General.

Wagner Electric Increases Its Service at Atlanta

Wagner Electric Corp., of St. Louis, Mo., announces the combination of the sales office and service station for the Atlanta territory and the installation of both in the new fireproof building at 14-20 Alexander Street, N. W., Atlanta, Ga. The same personnel will handle Wagner customers as before.

Schweitzer & Conrad Merges With Cutler-Hammer

Cutler-Hammer, Inc., Milwaukee, Wis., on July 1, acquired all common stock of Schweitzer & Conrad, Inc., Chicago manufacturers of high voltage equipment.

Schweitzer & Conrad will continue to operate as an independent manufacturing and selling unit. No changes in organization or personnel will be made except that Beverly L. Worden, president of Cutler-Hammer has also been elected president of Schweitzer & Conrad.

Mr. Conrad and Mr. Schweitzer have been retained as consulting engineers, and will continue their interest in the management as members of the board of directors.

Other members of the new Schweitzer & Conrad board are F. R. Bacon, who is chairman of the Cutler-Hammer board and F. L. Pierce and Louis A. Lecher who are also members of the Cutler-Hammer board.

George Hodgson, Ltd., Bought by G. Hattersley & Sons, Ltd.

The assets of George Hodgson, Ltd., Frizinghall Works, of Bradford, England, an old established firm of power-loom makers, have been sold to G. Hattersley & Sons, Ltd., loom makers, North Brook Works, Keighley, according to the vote of stockholders on June 27. It is understood that after liquidation Hodgson will be able to pay about 17s. to the pound sterling to the holders of preference shares. During the last two or three years 28 of Hodgson's customers went out of business, and the second-hand looms thus thrown on the market were sold at break-up prices. The new owners will not shut down the Hodgson works altogether but operations will continue on a light scale. The Hattersley company began business in 1789 when the first Rickard Hattersley set up a bolt and screw works at Keighley.

Stock Gift to Crane Employes

A gift of approximately $4,000,000 worth of stock to employes of the Crane Co., was announced last week by R. T. Crane Jr., president. The gift was in honor of the 75th anniversary of the founding of the company. The stock will be distributed to all employes who have been with the organization for ten years or more. Ten shares will go to each of those having ten years service, and one additional share for each additional year of service.

This is the third gift to employes since 1926 and brings the total of Mr. Crane's gifts to more than $10,000,000.

General Electric Orders For Second Quarter

Orders received by the General Electric Co. for the second quarter of 1930 amounted to $99,916,027, compared with $119,351,248 for the corresponding three months of last year, according to an annoucement by Gerard Swope, president.

For the six months ended June 30, orders received amounted to $190,313,758, compared with $220,716,456 for the first six months of last year.

Fuller Lehigh Co. Opens Atlanta Sales Office

Announcement has been made by the Fuller Lehigh Co., manufacturers of pulverized-coal firing equipment and Bailey water-cooled furnace walls, of the opening of a new sales office in the Candler Building, Atlanta, Ga. J. McC. Hill is in charge. The main offices and works of Fuller Lehigh Co. are located at Fullerton, Pa.

Harshaw Chemical Constructs Philadelphia Building

The Harshaw Chemical Co. has recently constructed and occupied a new building at Philadelphia for warehouse and office purposes. This new construction together with the alteration of existing buildings increases the warehouse facilities by more than 100%, giving a total of 39,000 sq.ft. for such purposes.

Sales and branch office activities are housed in the second floor of the new warehouse building. Quarters previously occupied by these offices have been altered to house the factory, offices and the new laboratory which functions chiefly in plant control but carries on some experimental work as well.

The Philadelphia plant takes up a full city block in the southeast section of the city near tidewater. The Pennsylvania, B. & O. and Reading railways enter the plant.

Chicago Pump Adds Atlanta Representative

The Chicago (Ill.) Pump Co. announces the addition to its list of representatives of R. J. Welsh, Atlanta, Georgia.

Obituary

James Hugh Clarke

James Hugh Clarke, president, Orinoka Mills, Philadelphia, one of the most widely known manufacturers of upholstery goods in the United States, died at his home in that city, July 6, at the age of 74 years. He had been ill for more than a year. Mr. Clarke was a pioneer manufacturer in Philadelphia, having been in the business for half a century. He was regarded as one of the leaders by the trade, and many advances in the last 25 years in this field can be traced to Mr. Clarke's influence. He was a member of the Manufacturers' Club and of the Whitemarsh Country Club. Surviving him are one son, one daughter and six grandchildren. His son is connected with the company that was headed by his father.

Henry D. Gagner

Henry D. Gagner, president and general manager of the Gagner Mfg. Co. of Statesville, N. C., died in that town on July 4 from injuries sustained in an automobile accident on June 10. He was 45 years old, and was a native of Canada. For many years he was superintendent of the Renfrew Mfg. Co.'s plant in Adams, Mass., and established the Gagner Mfg. Co. about 2½ years ago. He is survived by his widow, one brother, Peter Gagner of Hebronville, Mass., and six sisters.

John C. Meyer

John C. Meyer, founder, president and treasurer of the John C. Meyer Thread Co., Lowell, Mass., died July 7 at the summer home of his daughter, Mrs. Frank I. Fahey, at Marblehead Neck, Mass., aged 71 years. A native of Schenectady, N. Y., Mr. Meyer began his career as an errand boy for the J. & P. Coats Thread Co. His home was in Winchester, Mass., where he had been a liberal contributor to welfare and church undertakings.

L. Leak Spencer

L. Leak Spencer, secretary and treasurer of the Highland Park Mfg., Co., and a director of the Commercial National Bank, of Charlotte, died suddenly from a heart attack while visiting in Blowing Rock, N. C., last week. He is survived by his widow, one son and one daughter. Funeral was held in Charlotte on Sunday.